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Finland

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Final Programme and Abstracts of the European Conference on Chronic Disease Prevention

Helsinki, December 8-10, 2005

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KTL - National Public Health Institute, Finland

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C**over: Helsinki Cathedral, photo taken by Antti Uutela**

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WELCOME

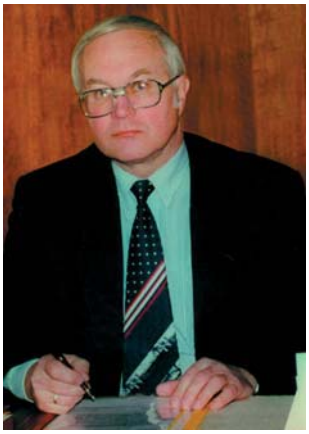
Exciting developments in science, technology and political structures marked Europe's entrance into the 21-st century. Population health continued to improve in a number European countries, however, not in many others thus resulting in gross inequalities and inequities in health.

Noncommunicable (chronic) diseases, although our understanding in their causation has also considerably advanced, remain the major health problem for all European countries, resulting in unnecessary morbidity, disability, mortality and losses in national economies. At its meeting in Kaunas, Lithuania in 1981 WHO recommended the development of integrated programmes for the prevention and control of noncommunicable diseases. However, health systems in many countries continue to address these issues in rather fragmented way. Today, when a renewed global strategy for the prevention and control of noncommunicable diseases was approved by the World Health Assembly in 2000, when the WHO Regional Office for Europe initiated the development of continent-wide strategy for chronic disease prevention and control as response to the initiative from CINDI collaborators, it is very timely to review and to build on the experience accumulated in Europe and worldwide in shaping new initiatives to cope with this most important health problem.

It is not by chance that Finland hosts his European Conference. Among the research initiatives that have improved health system performance and population health, the Finnish North Karelia project stands out as a premier example of effective community-based intervention. After more than 30 years of North Karelia Project innovations and 25 years' experience with integrated approaches to the control of noncommunicable diseases, we have a most exciting opportunity to critically assess the extent of our knowledge and shape our vision for future action. I sincerely believe that this conference will become a milestone and a turning point in our efforts to improve the health of all Europeans.

On behalf of the Scientific Committee

Professor Vilius Grabauskas
Chair, CINDI Programme Management Committee



EUROPEAN CONFERENCE ON CHRONIC DISEASE PREVENTION
Learning from the past – planning for the future

Organisers
Ministry for Social Affairs and Health (Finland), National Public Health Institute (KTL) and European Commission
Co-sponsored by the World Health Organization, Regional Office for Europe

Collaborators
CDC - Centers for Disease Control and Prevention, USA
European Cancer League
European Heart Network
Finnish Cancer Society
Finnish Center for Health Promotion
Finnish Diabetes Association
Finnish Heart Association
Health Promotion Agency – Northern Ireland, UK
North Karelia Project Research Foundation
Public Health Agency – Canada
WHO CINDI (Countrywide Integrated Noncommunicable Diseases Intervention) Programme Network

Date and Venue
December 8-10, 2005 at the Marina Congress Center, address Katajanokanlaituri 6, 00160 Helsinki, Finland

President of the Conference
Dr. Liisa Hyssälä, Minister for Social Affairs and Health, Finland

Vice-president of the Conference
Dr. Pekka Puska, Director General, National Public Health Institute - KTL, Finland

Committees
Scientific Committee
Chair: Vilius Grabauskas
Members: Jill Farrington, Igor Glasunov, Gudjon Magnusson, Aulikki Nissinen, Rafael Oganov, Pekka Puska, Matti Rajala, Aushra Shatchkute, Sylvie Stachenko, Erkki Vartiainen, Tor Jungman, Mika Pyykkö, Harri Vertio, Leena Etu-Seppälä, Susanne Logstrup, Bruno Meili
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Members: Jill Farrington, Brian Gaffney, Ritva Prättälä, Pekka Puska, Aushra Shatchkute, Sylvie Stachkenko, Erkki Vartiainen
Local Organising Committee
Chair: Erkki Vartiainen
Members: Hanne Heikkinen, Tiina Laatikainen, Ritva Prättälä
Conference Secretariat
National Public Health Institute, KTL
Department of Epidemiology and Health Promotion
Mannerheimintie 166, 00300 Helsinki, Finland

Scope and purpose

During the past 30 years regional, national and international programmes have demonstrated the benefits of an integrated approach to prevent non-communicable diseases in the population. In order to move from demonstration to dissemination and to transform the best practices into European-wide implementation and public policies, there is a need to look for new partners and strategies for new European public health gains. By improving awareness about existing experience the conference will provide a European platform for discussion on NCD policy development and action.

The specific aims of the conference are to

1. review the progress and experience of chronic disease prevention (CINDI and its pioneering North Karelia programme) in the WHO European region over the past,
2. discuss the theory and practice of chronic disease prevention in the population,
3. propose effective strategies and actions for chronic disease prevention on different levels,
4. contribute to the development of the new WHO European NCD strategy in 2006
5. provide background information for the Finnish EU presidency work on health

Programme

The programme is organised into main themes and specific topics. Together the themes and topics form core elements for developing the new NCD prevention strategy in Europe. The presentations in plenary sessions will combine one or more of the main themes and also preferably a special topic.

Main themes are:

1. Partnership
2. Capacity building and advocacy
3. Integration
4. Using evidence for public health policy
5. Resource mobilization, economics
6. Health inequalities

Specific topics are:

1. Tobacco
2. Obesity
3. Diet and physical activity
4. Alcohol
5. Role of networks (WHO, CINDI, EU, NGOs)
6. Role of national public health institutes
7. New NCD-strategy

THE PROGRAMME

Thursday, 8th December, 2005

9:00 – 17:00	Registration Poster Hall opens
14:00 – 14:30 Fennia II	Opening ceremony Welcome: State Secretary Terttu Savolainen, Finland Opening remarks: Director Gudjon Magnusson, WHO
14:30 – 16:30 Fennia II	Plenary session *"Partnership"* Chair: Erkki Vartiainen and Vilius Grabauskas Keynote lectures: How can we reduce the NCD burden in the WHO European Region? (WHO perspectives), Gudjon Magnusson EU public health programme, Matti Rajala Chronic disease prevention in Russia, Rafael Oganov Building European collaboration for public health action in chronic disease prevention, Vilius Grabauskas Past experiences – Future challenges, Pekka Puska Information on the conference programme
17:00 – 19:00 Restaurant, 2nd floor	Welcome reception

Friday, 9th December

8:30 – 10:00 Fennia II	Plenary session *"Capacity building and advocacy"* Chair: Pekka Puska Keynote lectures: Role of public health institutes, Jussi Huttunen The role of NGOs, Susanne Løgstrup Panel discussion, panelists: Jussi Huttunen, Susanne Løgstrup, Rafael Oganov, Jorma Huttunen, Roy Cameron
10:00 – 10:30 Fennia II foyer	Refreshment break and posters
10:30 – 12:00 Fennia II	Plenary session *"Integration"*, Chair: Robin Ireland Keynote lectures: Health in all policies, Kimmo Leppo Integrating programmes related to diet and physical activity, Kaare Norum Towards integrated public health action in chronic disease prevention: Challenges and opportunities, Sylvie Stachenko Panel discussion, panelists: Kimmo Leppo, Kaare Norum, Sylvie Stachenko, Jozica Zakotnik, Wojciech Drygas
12:00 – 13:30	Lunch

13:30 – 15:15 Parallel sessions 1:

Fennia II

WHO European Strategy on Noncommunicable Diseases in 2006
Chair: Vlasta Hrabak-Zerjavic

Preventing Chronic Diseases. A Vital Investment
Ruitai Shao

Development of a WHO European Strategy on Noncommunicable Diseases:
Progress, outline and issues for consideration
Jill Farrington

Baltica

Modelling workshop
Chairs: Darwin Labarthe and Wanda Bemelmans

Welcome and introduction of the workshop
Wanda Bemelmans and Darwin Labarthe

Overview of approaches to modeling prevention of chronic diseases
Hendriek Boshuizen

The RIVM Chronic diseases model
Talitha Feenstra

Applications of the RIVM chronic diseases model
Caroline Baan

The IMPACT CHD model: explaining mortality trends in different countries
Julia Critchley

The IMPACT CHD model: examining policy implications for treatment and prevention
Simon Capewell

Using Markov chain analysis to predict the outcomes of health policy decisions
Thomas Kottke

The dynamic regression method (DRM) as a tool for assessment of health dynamics in population using sequential cross-sectional survey data
Vladislav Moltchanov

Nordia

Interventions
Chairs: Aulikki Nissinen and Maria Teresa Tenconi

Effectiveness and efficiency of evidence based behavior intervention programs for promoting cardiovascular health
Christian Meyer, Arnd Hofmeister

Results of counselling after screening of cardiovascular risk factor cluster in five different male age cohorts. Preliminary results from a preventive trial.
Hannu Vanhanen

The role of psychosocial factors in prevention of high cardiovascular risk cluster (metabolic syndrome). Preliminary results from a preventive trial
Juhani Julkunen

Physical activity and diet during pregnancy- an intervention study
Riitta Luoto

The experience of a hotline established to support the national ban of indoor smoking, Italy, 2005
Lorenzo Spizzichino

Press Room

Public Health Policies and Action Plans
Chairs: Ricardo Tresseras and Tor Jungman

Action Plan for Promoting Finnish Heart Health – Health in all policies
Marjaana Lahti-Koski

National Diabetes Prevention Programme in Finland: FIN-D2D
Timo Saaristo

National alcohol and tobacco strategy in the Republic of Macedonia
Donev Doncho

Evaluation of the Health for All 2000 strategy in Catalonia
Ricardo Tresserras

Transforming UK plc to a health promoting economy: How to shape markets for health.
Jane Landon

Italy: The largest European country to ban smoking in all enclosed places. A preliminary evalution. Daniela Galeone

15:15 – 15:45 Refreshment break and posters
Fennia II foyer

15:45 – 17:30 Parallel sessions 2

Fennia II

Art and Science of Integrated NCD Prevention – CINDI Experiences
Chair: Sylvie Stachenko

Art and science of CINDI implementation: an introduction – Sylvie Stachenko

Trends in chronic diseases and their risk factors in Lithuania
Jurate Klumbiene

Trends in chronic diseases and their risk factors in Slovenia
Lijana Zaletel-Kragelj

Improving prevention of cardiovascular disease in primary health care in Slovenia
Zlatko Fras

Implementing integrated chronic diseases prevention in CINDI-Bulgaria
Elena Kaneva

CINDI Quit and Win
Patrick Sandström

CINDI/CARMEN chronic disease policy observatory
Clarence Clottey

Nordia

Capacity Building
Chairs: Kristiina Patja and Barb Riley

Fighting tobacco addiction in health professionals of CEE
Radu Negoescu

Perceptions of professionals' and patients' roles in health behavior counseling among Finnish physicians, registered nurses and public health nurses
Piia Jallinoja

National guidelines in chronic disease prevention: promoting life style change in primary healthcare in regional setting
Kristiina Patja

Establishing the «School for management of arterial hypertension»:tool to improve community control of hypertension
Aila Pilav

The efforts of the Sudanese Cancer Society (SCS) in the FCTC implementation in Sudan
Maisara Abdelrazig

Building Knowledge Exchange Capacity for Chronic Disease Prevention: Emerging roles for the voluntary sector
Barbara Riley

Baltia

Partnership and Networking
Chairs: Hannu Vanhanen and Brian Gaffney

HEPA Europe - The European network for the promotion of health-enhancing physical activity: a new contribution to address physical inactivity and sedentary lifestyles
Jožica Mauèec Zakotnik

EuroPharmForum NCD-pharmacy programs
Eeva Teräsalmi

Mind Your Heart: Partnership and Capacity Building with Media in Poland
Wojciech Drygas

Strategic Partnership between the Finnish Heart Association and Diabetes Association
Hannu Vanhanen

The role of the WHO Countrywide Integrated Noncommunicable Diseases Intervention (CINDI) Network in Chronic Disease Prevention: Experience in Georgia
R.Tataradze

Press Room

Role of Institutes
Chairs: Pekka Jousilahti and Roy Cameron

An emerging infrastructure for integrating research, evaluation, policy and practice in population intervention at local, national and international levels
Roy Cameron

The role of Estonian National Institute for health development in the prevention of cardiovascular diseases
Anu Hedman

Heart of Mersey: Applying the lessons of North Karelia in Greater Merseyside, United Kingdom
Robin Ireland

Key elements of successful chronic disease prevention programs in the United States
Randahl Kirkendall

Sustained community based prevention of CVD: From North Karelia Project to North Karelia Center for Public Health
Vesa Korpelainen

International Association of National Public Health Institutes (IANPHI)
Pekka Jousilahti

19:00 Conference dinner
Katajanokan Kasino

Saturday, 10th December, 2005

8:30 – 9:45 Fennia II	Plenary session *"Using Evidence for Public Health Policy"* Chair: Simon Capewell Keynote lectures: Towards European strategy for tobacco control, Luk Joossens A public health action plan to prevent heart disease and stroke, Darwin Labarthe
9:45 – 10:15 Fennia II foyer	Refreshment break and posters
10:15 – 11:30 Fennia II	Plenary session *"Resource mobilization, economics for prevention"* Chair: Thomas Kottke Keynote lecture: Economic aspects of obesity control, Philip James Panel discussion, panelists: Philip James, Maria Teresa Tenconi, Brian Gaffney
11:30 – 12:30 Fennia II	Plenary session *"Health inequalities"* Chair: Seppo Koskinen Keynote lecture: Health inequalities in Europe: the role of behavioural risk factors, Johan Mackenbach Panel discussion, panelists: Johan Mackenbach, Ritva Prättälä, Jurate Klumbiene
12:30 – 13:00 Fennia II	Closing ceremony Closing remarks Matti Rajala, Erkki Vartiainen Poster awards

INTRODUCING THE KEYNOTE SPEAKERS

Professor ***Vilius Grabauskas*** was born and educated in Kaunas, Lithuania. His Medical degree he received in 1966 from Kaunas University of Medicine. Between 1978 and 1986 he was working for the World Health Organization starting as a Medical Officer and completing his assignment as Director, Division of Noncommunicable Diseases (NCD), Geneva, Switzerland. Upon return from WHO he continued his research in NCD prevention (Director, CINDI-Lithuania), was actively involved in the formulation of national health policy in Lithuania, served as a chair of newly established National Board of Health. Internationally he continued active collaboration with and through WHO in different capacities. He served more than eleven years as Rector, Kaunas University of Medicine and currently continuing as Chancellor of the same University. Altogether he has close to 300 research publications.

Professor ***Jussi Huttunen*** is currently the Editor of the Finnish Medical Journal "Duodecim". Professor Huttunen graduated as M.D. and as a Doctor of Medical Sciences from the University of Helsinki in 1966. He has worked at the University of California, San Diego as a NIH Fellow and gained a Specialist Certificate in Internal Medicine, National Board of Health of Finland. He has also been associate Professor in Medicine in the University of Kuopio. In 1978 professor Huttunen became the Director General of the National Public Health Institute, Finland, a post he held until taking up his current position in 2003. In 2000-2001 he served as Director General of the Department of Health and Social Services in the Ministry of Social Affairs and Health of Finland. Professor Huttunen has chaired and been a member of several committees and expert groups established by the Finnish government and international organizations.

Professor ***W. Philip T. James*** (CBE, MD, DSc) chairs the Presidential Council of the Global Prevention Alliance, (in full the Global Alliance for the Prevention of Obesity and Related Chronic Diseases) and the International Obesity TaskForce, part of the International Association for the Study of Obesity of which he is senior vice president. He is director of the Public Health Policy Unit, and honorary professor of nutrition at the London School of Hygiene and Tropical Medicine. He chaired the United Nations Commission report on the nutritional challenges of the 21st Century entitled: "Ending Malnutrition by 2020 – An Agenda for Change in the Millennium." Professor James prepared the blueprint for the Food Standards Agency established in the United Kingdom and was primary author for the European Commission proposals for a European Food and Public Health Authority.

Luk Joossens is currently Advocacy Officer of European Cancer Leagues and Tobacco Control Manager of Belgian Foundation against Cancer. He has license in Sociology at the University of Leuven and Maîtrise in Sociology at the Sorbonne in Paris. He has been consultant on smoking prevention to the Commission of European Communities and Director of the European Bureau for Action on Smoking Prevention (BASP). He has also been a Member of the WHO Expert Advisory Panel on Tobacco or Health. Joossens is the WHO temporary advisor on tobacco smuggling. He is also a consultant to the International Union against Cancer and to the European Cancer Leagues. He is the author of more than 250 articles, reports and presentations on the different aspects of the smoking prevention policy. In 1991, he received the WHO Commemorative Award.

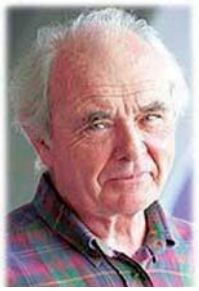
Darwin Labarthe (MD, MPH, PhD) is currently Acting Director, Division for Heart Disease and Stroke Prevention, National Center for Chronic Disease Prevention and Health Promotion, Coordinating Center for Health Promotion, Centers for Disease Control and Prevention (CDC), US Department of Health and Human Services. Dr. Labarthe received the A.B. degree in history from Princeton University in 1961, the M.D. degree from the College of Physicians and Surgeons, Columbia University, in 1965 and the M.P.H. and Ph.D. degrees in epidemiology from the School of Public Health, University of California, Berkeley, in 1967 and 1974, respectively. His professional activities over three decades were based primarily in the University of Texas School of Public Health, Houston. In 2000 he joined the Centers for Disease Control and Prevention. There he has led the development and implementation the long-range public health strategic plan, *A Public Health Action Plan to Prevent Heart Disease and Stroke*.

Kimmo Leppo is currently Director-General of the Department of Health in the Ministry of Social Affairs and Health. Before that he was Director-General of the Department for Social and Health Services in the same ministry. He received Licenciate of Medicine from University of Helsinki in 1967. He is doctor of medicine (Public health) and he has been Docent in Public Health in the University of Helsinki since 1980. Leppo has been Technical adviser to WHO/HQ and WHO/EURO in a number of fields related to health policies and planning since 1970 and member of the WHO Expert Advisory Panel on Public Health Administration since 1990. He has also been Senior Advisor in the Department of Health Service Provision, WHO/HQ, Geneva. Leppo has been in numerous national governmental commissions, both departmental and intersectional.

Mrs ***Susanne Løgstrup*** is currently the Director of the European Heart Network (EHN). Responsibilities include strategic planning, organisation of the EHN's annual conference, financial control, preparation of action plans and implementation of pan-European projects, including European Commission sponsored projects such as the 'Children, obesity and associated avoidable chronic diseases'; monitoring and responding to health-related developments in the European Union (EU); liaising with members of the EHN and overseeing and coordinating EHN publications. Mrs Løgstrup is editor of the regular bulletin '*Heart Matters*'. She holds Master's Degrees in Law and Business Administration (MBA).

Johan Mackenbach received a Medical Doctor's degree and a PhD in Public Health from Erasmus University in Rotterdam, the Netherlands. He is also a registered epidemiologist and public health physician. He chairs the Department of Public Health of Erasmus MC. He is a member of the Dutch Health Council and of the Dutch Health Research Council. His research interests are in social epidemiology, medical demography, and health services research. He has published over 200 papers in international, peer-reviewed scientific journals, as well as a number of books, and many book chapters and papers in Dutch-language journals. He is the editor-in-chief of the European Journal of Public Health, and has co-ordinated a number of international-comparative studies funded by the European Union.

Gudjon Magnusson (M.D., Ph.D.) is currently the director of Division of Technical support, Reducing Disease Burden, WHO Regional Office for Europe in Copenhagen, Denmark. Before that Magnusson has been Dean in Nordic School of Public Health, Gothenburg, Sweden; Professor, Senior Lecturer in Public Health, senior positions in Ministry of Health and Directorate of Health of Iceland and president of Icelandic Red Cross and Vice President of International Federation of Red Cross and Red Crescent. He has publications on health services research, health promotion and public health.



Kaare R. Norum is Professor (emeritus) of Medicine and Rector emeritus of University of Oslo. He is also currently Chair of an Expert Group on Diet and Physical Activity serving the European Regional Office of WHO. He took his MD and PhD at University of Oslo. As a young medical scientist he described a new inborn error of metabolism (Familial LCAT deficiency). This discovery brought him into lipid research, cholesterol metabolism and nutrition and its connection with coronary heart disease. Kaare R. Norum has published several chapters in textbooks, and about 300 scientific publications in peer reviewed journals. He was associate Dean and then later, Dean for the Medical Faculty, University of Oslo. He also served as Rector (President) of the whole University for some years. Norum has also been as a scientist in US, both at University of Washington and at National Institutes of Health, Bethesda, MD for several years. Kaare R. Norum has further had several international commitments and has served as the Chair for the WHO project on the "Global Strategy for Diet, Physical Activity and Health" 2002-2004.

Rafael G. Oganov is currently the director of the National Research Centre for Preventive Medicine, under the Ministry of Health and Social Development of the Russian Federation. In 1966 he graduated from the 2nd Medical Institute in Moscow. He is Doctor for Medical Sciences, professor of cardiology, academician of the Russian Academy of Natural Sciences, academician of the Russian Academy of Medical Sciences, Major Cardiologist of the Russian Federation. Oganov is also coordinator in a variety of cooperative programs on epidemiology and prevention of cardio-vascular and other noncommunicable diseases in the USSR and Russia including international programs such as MONICA, CINDI, INTERHEALTH. He is Chairman of Expert Council on Preventive Medicine and Health Promotion at Academy of Medical Sciences of the Russian Federation and director of the CINDI program in Russia. Oganov has more than 200 publications on noncommunicable disease epidemiology and control in scientific domestic and international journals.

Pekka Puska (M.D., Ph.D., M.Soc.Sc.) has been the Director General of the National Public Health Institute since late 2003, taking this position over from Professor Jussi Huttunen. Professor Puska graduated as Master of Political Sciences (1968) and as Doctor of Medicine (1971) from the University of Turku. In 1974 he received PhD from the University of Kuopio. He has been the director and the principal investigator of the North Karelia Project since it began. Dr. Puska has been working at the National Public Health Institute as research professor and department director since 1997. He also acted as the Director General from October 2000 to February 2001, after which he was called to WHO to lead the health promotion and chronic disease prevention operations. Dr. Puska has chaired and been a member of several national and international committees and expert groups.

Dr. ***Matti Rajala*** has served as Head of Unit and later as Minister Counsellor in the European Commission since 1996. Responsible for management of several Community Action Programmes, this included elaboration, negotiation and monitoring of policy initiatives and legal instruments e.g. in the areas of tobacco control, nutrition and alcohol as well as environment and health. He has been the chief negotiator of the EC in the Framework Convention on Tobacco Control in Geneva. He is also Commission representative in the Management Board of the European Monitoring Centre for Drug Dependency, and member of the European Environment and Health Committee of WHO. His responsibilities as Minister Counsellor include health and food safety policies. He has edited over 65 scientific publications in the field of public health, epidemiology and health education and promotion.

Dr. ***Sylvie Stachenko*** is currently the Deputy Chief Public Health Officer at the Public Health Agency of Canada. Dr. Stachenko earned a Doctorate in Medicine from McGill University in 1975. She finished her residency in family medicine at the Université de Montréal in 1977 and she earned a Master`s degree in Epidemiology and Health Services Administration from the Harvard School of Public Health in 1985. Dr. Stachenko was an Associate Professor in the Department of Family Medicine at the Université de Montréal, where she served as Research Director from 1984 to 1988. In 1988, she joined the federal government with the Department of Health and Welfare and, in 1989, was appointed Director, Preventive Health Services. From 1997 to 2002, Dr. Stachenko had been working with the WHO Regional Office for Europe located in Copenhagen as Director of Health Policy and Services. From 2002-2004 she was the Director General in the Centre for Chronic Disease Prevention and Control at the Public Health Agency of Canada.

ORAL PRESENTATIONS

Modelling workshop

1

Reducing the burden of sudden death: The potential impact of n-3 fatty acid supplementation, implantable cardioverter defibrillators and automated external defibrillators

Thomas Kottke
The Heart Center, Regions Hospital, St. Paul, MN, USA

Background. Analyses of cohorts of healthy individuals and randomized clinical trials with individuals who have coronary heart disease suggest that n-3 (omega-3) fatty acid consumption reduces total mortality by reducing risk of sudden death. The magnitude of this effect may be large relative to that of automated external defibrillators (AEDs) and implantable cardioverter defibrillators (ICDs). If so, documenting causality of effect should be high on the list of research priorities so that intervention policies and programs can be developed and implemented.
Methods and Results. We used Markov chain analysis in a hypothetical population, ages 30-84, to estimate the independent and joint impact of the three interventions on sudden death as reflected in total mortality rates. We tested the robustness of our conclusions by varying our assumptions about event rates, the expected effectiveness, and the potential uptake of each intervention. We found that AEDs would be expected to lower total mortality by 0.8% (range = 0.3% to 1.3%), and ICDs would be expected to lower total mortality by 3.3% (range = 0.6% to 8.7%). Augmentation of n-3 fatty acid levels would be expected to lower total mortality by 6.4% (range = 2.9% to 10.3%). If all three technologies were implemented simultaneously, half of the reduction in total mortality would accrue from increased consumption of n-3 fatty acids by the healthy population.
Conclusions. The potential impact of raising n-3 fatty acid consumption throughout the entire population is large relative to the potential impact of distributing AEDs and implanting ICDs.

2

The dynamic regression method (DRM) as a tool for assessment of health dynamics in population using sequential cross-sectional survey data

Vladislav Moltchanov[1], Cinzia Sarti[1], Jaakko Tuomilehto[2]
[1] National Public Health Institute, Helsinki, Finland
[2] University of Helsinki, Helsinki, Finland

Background and aim. The two practical tasks of management in public health, prediction and control, require adequate modeling of dynamics of health indicators. As a response to this, a new Dynamic Regression Method (DRM) was developed, based on the Health Field Concept (K. Lewin 1935). The aim of the presentation is to demonstrate the performance of this method using data from cross-sectional surveys.
Data and methods. Study population: North Karelia, Finland, Men aged 25-64. Source of data: cross sectional independent surveys conducted in years 1982, 1987, 1992. Analysis variables: BMI and its categorical derivatives. The DRM was run for each analysis variable producing estimates for levels and one–year birth cohort trends (C-trends). RESULTS The results are visualized by 3d figures. All peaks and dips of indicator levels (but not of C-trends) follow the cohort lines. Within cohorts, the C-trends for BMI consistently decreased over age. Furthermore, over calendar years a decrease in C- trends of BMI was observed for ages 35-45, possibly an effect of preventive activities. Comparison of trends patterns for categorical variables ((BMI>=25) and (BMI=>30)) provided additional information on the effect of prevention: significant differences in C-trends were detected in overweight subjects aged 55 to 64.
Conclusions. The DRM method provides sensible view on health dynamics. It reveals clear difference between the levels of parameters themselves and C-trends. From practical perspectives - it is C-trends, not levels, which are primarily modifiable by preventive activities. Analysis of changes in C-trends over age and year provides a way to evaluate the efficacy of prevention activities.

Interventions

3

Effectiveness and efficiency of evidenced based behavior intervention programs for promoting cardiovascular health

Christian Meyer[1], Arnd Hofmeister[2]
[1]Klinik für Kardiologie, Pneumologie und Angiologie, Medizinische Fakultät der HH-Universität Düsseldorf,
[2]Arnd Hofmeister, EUMAHP-Projekt, Fachbereich Sozial- und Gesundheitswesen der Hochschule Magdeburg-Stendal (FH)

Background and Aim. As regards health promotion cardiocascular health is one of the main topics in the European Union. There is a lot of evidence being generated from basic research between molecular biology, epidemiology and social science. Developments during the last years tried to meet the requirements of these facts but the transfer into practice of heart health promotion has been discussed in different ways. Evaluation of health promoting behavior intervention programs has been criticised. With regard to this context the research project at hand summerised the cognitions of heart health promotion intervention programs. In this

connection it would be able to strengthen the evidence of heart health promoting intervention programs and to gain helpful information for future innovative concepts for heart health promotion pracice and research.
Methods. The actual literature with regard to effeciveness and efficiency of evidenced based Behavior Intervention Programs for promoting cardiovascular health has been scanned. The programs has been categorized into four main topics: physical health, nutrition, addiction (nicotine)- and stress accomplishement programs. All intervention programs has been reviewed and underwent as far as possible a Meta-Analysis.
Results. Many different kinds of heart health promotion intervention program has been established during the last decade. They can be categorised to the outlined four intervention dimensions. Even some of the projects combine different fields of behavior intervention. Some programs contain a gratifying potential for promotion heart health promotion. Different markers can be summerized to confirm these results. New cognitions from molecular cardiology and epidemiology showed new dimensions of superordinated markers to determine the outcome of behavior orientated health programs. Tools like e.g. the SF-36 (Short-Form 36 Questionnaire) has been established during the past years. Comparing research with reference to the great success in the field of cardiovascular health promotion in Finnland would be desirable to underline the european overvalue of heart health promotion.

4

Results of counselling after screening of cardiovascular risk factor cluster in five different male age cohorts. Preliminary results from a preventive trial.

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Background. Cardiovascular risk factor cluster is typical of high risk persons preceding metabolic syndrome (MS) which confers an elevated risk for cardiovascular diseases as well as for Type-2 diabetes. To find high risk persons among male citizens in two socioeconomic regions of Helsinki we used a risk chart originally developed for the North Karelia Project. The aim is to prevent MS. We describe the procedure and changes in risk factors during six months. Helsinki Heart District and the Health Department of the City of Helsinki did the screening.
Methods. Each male age cohort of 40, 45, 50 and 55 years was invited to health check-up to local health centre where nurses from Heart District interviewed them and took the measurements and blood samples. When results were known same nurses gave counselling for those identified as high risk. Cardiovascular risk-index consisted of body mass index (BMI), total serum cholesterol level, blood pressure, smoking, and exercise activity. According to established criteria in high-risk persons the risk index is 4,5 or more. High-risk persons were offered participation in intervention programmes organized by health centres.
Results. A total of 2990 middle-aged men were invited and 40-50 % of them depending of the age cohort participated. Almost half of them were classified into high-risk group. Data on six-month follow-up was obtained from 90 % of high-risk men in whom the different risk parameters reduced significantly. The risk index was reduced by 25 % independently in different subgroups with and without MS criteria. It is concluded , that individual counselling after screening was successful. Although the intervention was uncontrolled the consistency of individual risk factor changes with 25% reduction in total index confirms the statement. Dietary recall revealed poor nutritional habits among the high risk men. Knowledge of risk factor profile and counselling increased individual empowerment according to the questionnaire.

5

The role of psychosocial factors in prevention of high cardiovascular risk cluster (metabolic syndrome). Preliminary results from a preventive trial.

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Background. Metabolic syndrome (MBS) confers an elevated risk for cardiovascular diseases (CVD)as well as for Type-2 diabetes. This study was part of a trial aimed at to prevent the development of MBS in male Helsinki citizens. In this sub-study we wanted to clarify the association of psychosocial factors with a cluster of CVD risk factors and to investigate their impact on the results of the intervention.
Methods. The CVD risk-index consisted of body mass index (BMI), total serum cholesterol level, blood pressure, smoking, and exercise activity. According to previously established criteria a high-risk group (risk index > 4,4) was identified and offered participation in various intervention programmes organized by local health centres. A total of 1288 men at age cohorts of 40, 45, 50, and 55 years were screened for the preventive trial. Out of them 537 (41,7 %) were classified into the high-risk group; data on six-month follow-up was obtained of 480 (89,4 %) high-risk men. Psychosocial factors were assessed with self-report questionnaires at baseline and at six months. They included standardized measures of vital exhaustion, work stress, cynical hostility, and the Beck depression scale. Preliminary results show that, after controlling for age, level of education and marital status, high levels of exhaustion and depressive symptoms associated statistically significantly ($p < 0.001$) with the risk-index. The association was mainly based on exhaustion and depression correlating with unhealthy habits such as sedentary life style, smoking, and high BMI values. The psychological factors, however, did not modify the

significant reduction in the total risk-index observed during six months.
Conclusion. It is concluded that while psychological factors such as vital exhaustion and depressive symptoms associate with unhealthy life style and elevated cardiovascular risk they do not interfere positive changes in risk factors and successful preventive efforts.

6

Physical activity and diet during pregnancy- an intervention study (NELLI- neuvonta, elintavat ja liikunta neuvolassa)

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Introduction. High pregnancy weight gain may increase the risk of postmenopausal breast cancer. High pregnancy weight gain is also associated with higher postpartum weight retention. Physical activity (PA) and diet both have some effect on weight development during and after pregnancy. The relationships of PA and dietary counselling to PA, diet and weight development are studied in a controlled trial in maternity and well-baby clinic settings. The primary aim of this pilot study is to test the feasibility of the trial.
Material and methods. This pilot study was conducted in 6 maternity and well-baby clinics in Finland. The clinics were selected to experimental and control clinics. Altogether 132 prepartum (8-9 weeks pregnant) and 92 postpartum (2months) primiparas were recruited in August 2004-January 2005. Women in the experimental clinics participated in one individual counseling session on PA and one session on diet. The counseling was intensified by 3-4 booster sessions and supervised group PA sessions were offered once a week. The participants of the control clinics received usual care only. Physical activity and dietary habits, wellbeing and adverse effects were followed by questionnaires. The pregnant women kept also food records. Midwives measured weight, blood pressure (pregnant women) and waist circumference (postpartum women). Two blood samples were taken from all participants. Nipple aspirate fluid was obtained in the postpartum women.
Timetable. The intervention period (August 2004-September 2005) will finish soon. Data will then be analyzed and preliminary results are available in the beginning of December 2005.

7

The experience of a hotline established to support the national ban of indoor smoking, Italy, 2005

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Background. On January 10, 2005, a law was implemented in Italy banning smoking in all enclosed public spaces. Because of the complexity of the law and misconceptions about its content, the Ministry of Health established a free daytime hotline to respond to public inquiries and develop content for a related, frequently updated website.
Methods. Between January 10 and February 10, 2005 information on characteristics of callers and contents of calls was entered directly into specially-designed software by 10 physicians and technicians who had been trained to respond to the calls. Data were analyzed on a daily basis and at the end of the first month of observation.
Results. A total of 4032 calls were received: 13% during the first day and 55% during the first week. Forty-nine percent were from the general public, 26% from those who would likely be responsible for implementation of the law (managers and directors of various public and private structures), and 23% from employees. Approximately 40% asked for clarifications of the law or about types of structures covered by the law and 25% concerned wording and location for the required signage; less than 3% were complaints about the law. On the basis of calls received, the numbers of questions and answers on the website was increased from 30 to 100 during the first month.
Conclusions. The hotline was a highly useful channel of communication that permitted provision of information on the law and how it was to be applied, but it also allowed us to obtain information that were used to update a widely-accessed website. Furthermore, it identified weaknesses in the law that require further clarification; it also identified major stakeholders. Although initially labor-intense, we would recommend the use of similar hotlines in other countries implementing major health laws.

Public Health Policies and Action Plans

8

Action Plan for Promoting Finnish Heart Health – Health in all policies

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In most cases cardiovascular diseases (CVD) can be prevented or at least delayed. There exists scientific

knowledge of how, in theory at least, cardiovascular diseases could be eliminated as a public health problem among working-age adults. The challenge is to turn theory into praxis in health behaviour and in the living surroundings that support it. The goal of Finnish Heart Association is that in 20 years' time CVD will no longer be a significant health problem among working-age Finns and that people have more healthy and active years in their lives. To reach this goal, more effective actions are needed at all stages of the development and treatment of CVD. Action Plan for Promoting Finnish Heart Health for the years 2005-2011 was published in June 2005. It gives guidelines and strategies for actions to prevent these diseases and, by this way, also to promote health on population level. It is part of the Finnish Heart Plan which covers actions related to CVD prevention together with care and rehabilitation of CVD patients. Representatives from tens of different stakeholders participated in preparing the Action Plan. The preparation was conducted in four working groups which focused on health promotion during different seasons of the life cycle: childhood, youth, working-age and ageing. The groups produced extensive background papers which were crystallized into 50 action proposals representing different fields and target groups. Fourteen proposals focus on the whole population, rest of them on different seasons of the life cycle. The key message for policy makers is that the prerequisites for health should be taken into account in all decision making in society. The targets of the proposals are e.g. health care, educational and cultural sector, physical activity sector, society planning and building, food industry, food services and mass media.

9

National Diabetes Prevention Programme in Finland: FIN-D2D

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Type 2 diabetes (T2D) is one of the major chronic non-communicable diseases, and it's prevalence is rapidly increasing worldwide. Current evidence shows that T2D can be prevented by lifestyle intervention. To meet the menacing diabetes epidemic, there is an urgent need to translate the scientific evidence regarding prevention of T2D into effective action at population level. In Finland, Development Programme for the Prevention and Care of Diabetes in Finland 2000-2010, DEHKO, was prepared under coordination of the Finnish Diabetes Association. The aim of the programme is an overall improvement of diabetes care and prevention of T2D. Prevention of T2D comprises of three concurrent strategies; the population strategy, the high-risk strategy, and the strategy of early diagnosis and management. To evaluate the programme, and to produce new models that will enhance the programme, an implementation project, FIN-D2D, will be performed in five hospital districts during the years 2003-2007. The FIN-D2D project is carried out by the Finnish Diabetes Association, the five hospital districts, and the National Public Health Institute. The practical diabetes prevention work is based on the experiences in the Finnish DPS-study, and is carried out mainly by primary and occupational health care providers. The aim of the FIN-D2D is to reduce the T2D incidence in high-risk subjects, and to reduce the prevalence of undiagnosed T2D. Further, the project assists to generate regional models for the prevention. The feasibility, effectiveness and costs of the project will be evaluated according to a specific evaluation plan. Evaluation includes comparison of the geographical areas participating in the project to the rest of Finland regarding incidence of T2D and prevalence of undiagnosed T2D. Screening of the high-risk subjects and the practical intervention work has started in year 2004. Baseline data and first experiences of the process are expected in the near future.

10

National alcohol strategy in the Republic of Macedonia

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Alcohol abuse is a major avoidable risk factor for cardiovascular diseases, liver cirrhosis and cancer, and for many intentional and unintentional injuries among the population in Macedonia. According to the official data from the State Statistical Office in Macedonia for average annual consumption of alcohol beverages per member of household there is a decrease in consumption of wine, from 6.8 lit. in 1992 to 4.4 lit. in 2002, and spirits, from 5.4 lit. in 1992 to 1.9 lit. in 2002. But, there is an increase in personal consumption of beer, from 10.5 to 14.1 lit. in the same period. It is difficult to obtain accurate information on consumption of alcohol in Macedonia because of high levels of unrecorded household production and consumption. Macedonia is a country where alcohol is used daily, in every occasion and psychological condition: cheerfulness, solemnity, sadness. According to some estimates there are about 60.000 alcoholics/ alcohol addicts in Macedonia, which represent about 3% of the total population of the country. Some studies and surveys indicate high levels of consumption among men and youngsters. Alcohol habits of binge and excess drinking among adolescents and students is of special risk for diseases and premature deaths.Following the recommendations of WHO from the European Alcohol Action Plan, a draft National Alcohol Strategy in Macedonia for the period from 2005 to 2008 has already been prepared and establishment of an Inter-sectoral Commission initiated. Special attention within the Strategy is given to community involvement and active role of the NGOs and civil society.Paper describes the content of the Strategy including

immediate, short-term, long-term and continuous or permanent measures and draft Action plan for their implementation.

11

Tobacco control strategy in the Republic of Macedonia

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Tobacco smoking is one of the most important risk factors leading to diseases for remarkable proportion of the population in Macedonia and reason for poor health and premature deaths of many people. Regardless of decrease of share of the annual average funds used for tobacco per member of household, from 3.1% in 1992 to 2.8% of the personal consumption in 2002 (State Statistical Office data) surveys and research data indicate increasing trends of the incidence of smoking and diseases connected with smoking, first of all cancer, cardiovascular and respiratory diseases.In June 2005, the Government of Macedonia enacted Tobacco Control Strategy for Provision and Promotion of Health Protection of Population in Macedonia from 2005 to 2010. By enacting the Strategy, the Government of Macedonia officially accepted the responsibility for setting population health and human life protection against tobacco as a priority, with no smoking as a norm and right for all citizens to health, clean air as well as healthy living and working environment. At the same time the Government has enacted Decision with regards to the WHO FCTC to be signed by the Minister of Health of R. Macedonia.The paper presents the Tobacco Control Strategy and its guiding principles, action and research priorities, the importance of inter-sectoral approach, as well as regional and international collaboration and mechanisms and ways for financing the activities envisaged in this National Strategy document.

12

Evaluation of the Health for All 2000 strategy in Catalonia

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Objective. To evaluate achievement of the Health and risk reduction targets established in Catalonia in 1991, for the year 2000.
Methods. Between the years 2001 and 2003 several studies were carried out in Catalonia, in order to evaluate the targets that had been established for the year 2000 following the recommendations of the WHO-Europe strategy Health For All in the year 2000. These studies included several sources of information like, the population register, the mortality register, hospitals discharges register, the statutory diseases register, the drug consumption information system register, the HIV epidemiological information system register, the maternal and child information system register, workplace accidents register, assisted reproduction register, abortion register and renal disease register. Some ad hoc studies that were carried are, the Catalan health survey and the Catalan health examination survey, smoking survey among exemplary role professionals (physicians, nurses, teachers and pharmacists), dental caries survey in children, physical activity survey, drug consumption survey, the study of preventive practices in primary health care through auditing of clinical records and the Catalan nutritional survey. Other important sources of information were the study of nosocomial infections and the myocardial infarction register in the population of Girona.
Results. 5 of the 111 target that had to be evaluated were not possible to study because of the difficulty in getting the indicator or a inadequate formulation. Among the 106 that were evaluated, 68 (64,2%) were fully achieved, 9 (8,5%) were partially achieved what was defined as the achievement of at least 50% of the expected change, and 30 (28,3%) were not reached.
Comments. The elaboration of a Health Plan with quantitative targets and with a limit in the time has been a practical and clear tool for both, designing interventions and its evaluation. The results show that more than 2/3 of the targets were achieved. While most of the targets related to clinical practice and preventive medicine were reached, more of those that were not achieved were more directly related to public health interventions and especially those related to chronic disease risk factors interventions. This can be partially explained by the fact that, in Catalonia during this ten year period, there was a higher effort in improving prevention practices in clinical settings, than in community interventions. There was a major emphasis in high risk approach than in population approach.

13

Transforming UK plc to a health promoting economy: How to shape markets for health

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Commercial organisations and their products can have massive public health effects. The creation of wealth and employment enables better standards of living and promotes health when employment policies and business practices are appropriately regulated. However, the extrinsic costs which arise from negative health impacts of business practices are borne by society, not industry. In the UK, as elsewhere, we lack a coherent government policy or regulatory framework to either protect against avoidable chronic disease arising from health-damaging products or to enable the corporate sector to actively promote health.The National Heart Forum (the UK CHD prevention alliance) and the Royal College of Physicians

(the representative body for physicians in England) is developing a policy and advocacy programme, to enable new connections between knowledge and networks relating to tobacco, nutrition, physical activity and alcohol.It aims to identify and describe the necessary conditions and measures to shape and secure a health promoting economy in the UK and throughout Europe and identify the particular contributions of national and local government, industry and civil society sectors. Through a series of focused projects, the programme will evaluate levers such as codes of practice and standards, legislation, taxes and subsidies, independent industry monitoring and so-called 'counter-balancing measures'. This presentation will, report on the initial project of the programme which looks at social marketing. In the light of the obesity epidemic and growing interest from governments and the food industry to 'counterbalance' the promotion of energy-dense, convenience and snack foods, the project will look at lessons learned from experience in tobacco and alcohol to explore options for non-compromising partnerships for social marketing between government, health professionals, NGOs and the business sector.

14

Italy: The largest European country to ban smoking in all enclosed places. A preliminary evaluation

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On January 10, 2005, a law was implemented in Italy banning smoking in all enclosed places. A number of activities have been undertaken to support and evalute the new law, including creation of a hotline, pre and post surveys of bar and restaurant owners, a national behavioral risk factor survey (BRFS), visits by public health inspectors, and market research on sales of tobacco and smoking cessation products.
Results are as follows:
Hotline: During the first month, 4032 calls were received (55% in the first week). Half were from the general public; < 3% were complaints about the law. Bar and restaurant survey: Observed smoking in the >1600 bars and restaurants visited declined from 31% before to 0.3% after implementation. Most proprietors (74%) reported their customers are satisfied with the law. Only 12% stated that the law resulted in significant declines in revenues. Of the 46% who themselves smoked, 80% had reduced cigarette use or tried to quit. BRFS: Preliminary national data demonstrate that among smokers, 40% report having decreased the number of cigarettes smoked since the law went into effect. Public health inspections: Fines were issued in 4.9% of the 5.597 inspections conducted in the first three months after implementation, mostly for lack of compliance with required signage rather than for smoking on the premises. Marketing data: Between January-April 2005, sales of cigarettes decreased nearly 9% in comparison with the same period in 2004. During the first two months of the year, a substantial increase in the sales of cessation products (+300%) was observed.
In conclusion, Italy is the largest European country to have banned smoking in all enclosed places. Early data demonstrate that the law has been clearly understood, generally respected and widely supported by principal stakeholders. Furthermore, it seems to have resulted in a decrease of tobacco consumption.

Art and Science of Integrated NCD Prevention - CINDI Experiences

15

Changes in the epidemiological situation of non-communicable disesases in CINDI demonstration areas

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Background and aim. Lithuania joined WHO Countrywide Integrated Noncommunicable Diseases Intervention Programme (CINDI) in 1983 aiming at non-communicable disease (NCD) reduction in the population through integrated action against common risk factors such as tobacco, alcohol, physical inactivity and unhealthy nutrition. CINDI-Lithuania demonstration areas covered five rural regions and Kaunas city. The purpose of this presentation is trend assessment of NCD mortality and changes in the prevalence of risk factors in population aged 25-64 between 1987 and 2001.
Methods. The data of Lithuanian Health Information Centre have been used for mortality analysis. The trends in mortality rates were assessed in two time periods (1988-1994 and 1995-2001) by applying logarithmic regression model. Risk factor prevalence was computed from population surveys of 1987, 1993 and 1999 performed in five rural regions.
Results. The nineties health crisis, which culminated in 1994, made trend analysis problematic. While cardiovascular mortality between 1988 and 1994 increased by 6.2% annually in both genders, significant increase in total mortality by 6.4% annually was observed only in men. Between 1995 and 2001 decline in total mortality was observed: significant in females (4.3% annually), however not in males. Decline in cardiovascular mortality was observed in both genders, most significant caused by coronary heart disease in females (8.1% annually). During the observation period the prevalence of hypercholesterolaemia (>5 mmol/l) decreased from 84.8% to 61.6% in men and from 83.1% to 63.2% in women. The proportion of overweight

persons (BMI>25) declined by 4.4% in men and by 7.4% in women. The prevalence of smoking increased in women (from 3.7% to 12.6%) with no changes in men. The consumption of alcohol increased in both genders. The prevalence of hypertension declined in women, with no significant changes among men.
Conclusion. The trends of mortality rates in adult population of five Lithuanian regions paralleled changes in the prevalence of main risk factors of non-communicable diseases.

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Health promotion programme in Pomurje Region/ Slovenia efficiency assessment. Preliminary Results of CINDI Health Monitor Survey 2004

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Background and aims. In Slovenia the lowest social economic and the worst health indicators are registered in the most north eastern part, Pomurje Region. Specific health enhancing programme for rural population aiming at influencing unhealthy behaviours (unhealthy nutrition, heavy alcohol drinking, smoking, insufficient physical activity etc.), financially supported by the Ministry of Health of the Republic of Slovenia, was launched in this region in 2001. In the present study first results of assessment of efficiency of this programme are presented.
Methods. In late spring 2004 a second national/regional survey according to WHO-CINDI Health Monitor methodology was performed. From Pomurje region 601 adults aged 25-64 participated in this survey (response rate: 61%). In preliminary analysis selected health indicators (prevalence as %) were compared to their values in 2001. Chi-square test was used for statistical assessment.
Results. The results of testing the differences in prevalence between 2001 and 2004 showed clear shift to more healthy behaviour in kind of fat for food preparation (2001: olive oil 7,1%, lard 30,3%; 2004: olive oil 15,2%, lard 20,8%; p<0,0005), frequency of eating fried foods (at most 1-3 times per month - 2001: 37,1%; 2004: 54,0%; p<0,0005), and frequency of drinking soft drinks (every day - 2001: 42,9%; 2004: 29,1%; p<0,0005).
Conclusions. The results of the study, though rough, show that the health promotion programme in Pomurje region proved to be very efficient, though standardisation on confounding factors (sex, education level) is necessary to establish more reliable assessment.

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Comprehensive nationwide programme on cardiovascular prevention in Slovenia – first 3-years experience

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Background. In Slovenia cardiovascular diseases (CVD) are the cause of nearly 40% of all deaths and the prevalence of atherosclerotic diseases was estimated 6% in general population. Except smoking other major CVD risk factors increased in prevalence during the nineties. This led to a strategic decision to implement integrated program on primary cardiovascular prevention.
Methods. Already in 2000, the consensus on national guidelines outgrew into "Nationwide Program on Primary Prevention of CVD". The program started officially in 2002 and consisted of population screening and identification of individuals at high CV risk, followed by systematic health education (within the network of 61 state appointed health education centers (HECs) at the primary level) and other necessary diagnostic and therapeutic interventions. Collection and evaluation of data and continuous upgrading of the programme represent a system of its quality assurance.
Results. The implementation carried out in the entire territory of Slovenia involves all GP's practising in our primary care. In three years, 310,706 preventative visits were performed (men from 35-65 and women from 45-70 years of age) and 246,818 (50,2% males) recorded within the registry. The results on major risk factors show worrying situation - 79,2% of adults have blood cholesterol over 5,0 mmol/l, 49,9% have BP > 140/90, smoking prevalence is 22%, while 74,7% are overweight and 29,7% obese; 23,7 % of population was identified to be at high (>20% in ten years) global coronary risk. During the first three years, 57,000 individuals (18,4%) were treated in HECs. Recent cross-sectional study showed that our efforts have already given some positive effects, the number of adults at high risk decreased significantly in the period from 1997-2003.
Conclusion. Cautious implementation and confirmation of positive results of the interventions will justify the invested funds and pay off the efforts and endeavours of all the involved partners.

Capacity Building

18

Fighting tobacco addiction in health professionals of CEE

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Background. Health professionals (HP) of CEE countries (CEEs), replicate somehow their general population with a smoking prevalence in physicians amounting % 32.2±14.0 SD (n=12, accessing EU) significantly higher than that of the European Union (EU: % 19.8±10.4 SD, n=13).
Methods. EURO's 2002 Quit&Win campaigns (Q&W), first addressing health professionals (HP) as a separate group, featured a Romania-initiated non-formal contest among CEEs that has been preliminated by a thematic conference involving Czech Republic, Poland, Slovakia & Romania, Moldova as observer and Finland as a reference country. It promoted The Herghelia Charter (HC) - a policy move to discourage smoking in HP as a habit embedded in CEEs' cultural models.
Results. Among the 18 EURO's Q&W campaigns in HP, all but two CEEs accessing EU (11) took the challenge scoring averagedly 10 % HP out of total enrollment, with Hungary (989) and Bulgaria (867) over the mean percent, and Turkey with a record 9096 HP entries. With a total of over 90 thousand Q&W-iners in 2002 Turkey illustrated force of a campaign well orchestrated, fully mediatized and supported at highest official levels. Thus separate & special targeting HP in terms of entry forms, distribution networks and national prizes has greatly got over the "natural" HP enrollment of 1 % or less performed in previous Q&W editions. In terms of engagement to quit as percent of all smoking HP (e.g. in Romania about 4 per mille), a lot remains to do in CEEs. While in longer view Q&W and other positive-oriented, community approaches could help HP to quit, on shorter time alignment to EU standards by alleviating "endemic alibis for professional consciousness brought about by poverty, injustice, distrust and corruption" (HC) seems to depend on more aggressive policies adding to the ethical discourse selection & promotion incentives, and law enforcement (e.g. Romania fully expelled smoking from all health units since January 30, 2003).
Conclusion. Competitive, separate Q&W campaigning in HP may stand for an instrument to emulate CEEs' engagement for better heart health in the United Europe.

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Perceptions of professionals' and patients' roles in health behavior counseling among Finnish physicians, registered nurses and public health nurses

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The present study is part of the VALTIT program aiming to develop and implement regional current care guidelines on metabolic syndrome in the Päijät-Häme hospital district, Finland, and the research and development program GOAL (Good Aging in Lahti Region, Ikihyvä). At the beginning of the VALTIT program, a questionnaire on current practices of and attitudes towards clinical guidelines and lifestyle counselling was sent to the health care personnel in primary and secondary care. The present study examines health professionals' perceptions of their respective roles and patients' role in management of lifestyle related diseases and lifestyle change. The response rate was 59% (n=301). We found that a clear majority of both physicians and nurses considered lifestyle counselling as part of their respective tasks. 52% of physicians and 61% of nurses considered that they have enough skills to provide lifestyle change counselling and two thirds of both groups indicated that they actually had managed to help many patients to change their lifestyle toward a healthier direction. More than half felt that the rush at their work site prevents them from tackling their patients' life situations. Overall, there were no major tensions between the physicians' and nurses' views about their professional roles. However, there was dissatisfaction with the functioning of the chain of referrals within work site and between primary and secondary care. The current idea of patients' active role in treatment of chronic diseases was well accepted among our respondents. However, especially the nurses seem to take as their task to make patients follow the given instructions, indicating the co-existence of professional-centred and patient-centred care. It seems that there is willingness to counsel but not enough skills and time available for the task at the moment. We suggest that motivational skills are needed, not only skills to distribute information.

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National guidelines in chronic disease prevention: promoting life style change in primary healthcare in regional setting

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The information load in medical sciences is expanding rapidly with wider possibilities to cure or prevent diseases. The demand for quality standards and equal practices within limited resources support evidence based approaches and multiprofessional collaboration in developing practices to ensure seamless care pathways of patients require good documentation and common decisions for all health professionals. The VALTIT program aims to develop and implement regional current care guidelines on metabolic syndrome within the research and development program GOAL (Good Aging in Lahti Region, Ikihyvä). It aims at a) studying multiprofessional approach in implementing national guidelines in health care b) combining national guidelines, which have common approach in life-style changes c) describing the facilitating process and its obstacles in regional setting d) on the long term,

demising the load of chronic disease in health care e) decreasing the chronic diseases and socio-economic difference in the region f) economic evaluation within the project of overall costs in implementation of guidelines. Study environment: Päijät-Häme hospital district, and the 14 municipalities in partnership with National Public Health Institute and UKK-Institute and the University of Helsinki. Main methods: Main analyses constitute on facilitators and barriers in different health professional groups and at organizational level. Methods include i.e. local and regional facilitated group work and sessions, and electronic patient document searches for special indicators, a prospective cohort study and use of national registries. Base-line questionnaire to health professionals has been conducted. In this presentation we will present the concept of using current care guidelines as tool in chronic disease prevention to induce regional collaboration. First study results include the perceptions of professionals' and patients' roles in health behavior counseling among health professionals. Main outcomes of the VALTIT will include tools for empowerment of the health care personnel in facilitating individual's health behavior and supporting the active role of patient.

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Establishing the «School for management of arterial hypertension»:tool to improve community control of hypertension

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Background and aim. The results from recent population survey conducted among adult population in Federation of Bosnia and Herzegovina (FBIH) showed the rather high prevalence of hypertension (41%). The most hypertensive subjects were treated with antihypertensive drugs (79%). Among them, only 13% of participants were adequatly controlled. The inadequately control of hypertension seemed as a major problem related to integrated hypertension management at community level. The model of integrated hypertension management as a population based, well planned and well coordinated programme should be established as a part of primary health care (PHC) reform in the FBIH. The strategic long-term aim should be the significant distributional transition of the blood pressure level among adult population.
Methods. Modular training course for PHC teams as a referal programme titled «School for management of arterial hypertension» prepared by public health institute should be evidence based on research data and adaptabile concerning local enviromental. The training programme must be directed primarily to general life style modification giving the place for multisectorial approaches. The main stress are on the public health approaches of arterial hypertension at community level. Hence, in training curricula for health personnel should be involved the representatives from local food industry, at least.
Conclusion: Establishing the «School for management of arterial hypertension» with the main aim in improving knowledge, attitudes and practices of PHC teams in the reduction of hypertension at community level is seen as a strong tool to improve community control of hypertension, especially in the countries with high level of uncontroled hypertension. This modular programme should be integrated closely to the PHC settings and established as a indivisible part of ongoing PHC reform in the FBIH.

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The efforts of the Sudanese Cancer Society (SCS) in the FCTC implementation in Sudan

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Objectives. The SCS (youth NGO against cancer and tobacco in Sudan) and in collaboration with the WHO has adopted a project to support the signature and ratification of the FCTC in Sudan. The project had two target groups, the first was decision makers in order to encourage them to sign and ratify the FCTC. The second was the public to inform them about the importance of FCTC.
Methods. The SCS has collaborated with local NGOs & associations, international organizations, and with the various means of local media. Methods included: letters & individual meetings with decision makers (including Mr. President, Mr. Vice President, ministers; Parliament members, and others), media campaigns, workshops, huge celebration on the World No Tobacco Day 2004, specialized web site, questionnaires and public education programs / materials. Results: Sudan signed the FCTC. Development of a national tobacco control strategy in line with the FCTC. A new anti-tobacco law was approved by the parliament. Formation of a national tobacco control activists committee. Increasing the awareness about the FCTC and tobacco hazards in general among the target groups.
Conclusions. The NGOs and as part of the society are more capable of reaching public and thus achieving the desirable society change. Moreover, the NGOs can play a vital role in the adoption of national strategies.

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Building knowledge exchange capacity for chronic disease prevention: Emerging roles for the voluntary sector

Barbara Riley
Centre for Behavioural Research and Program Evaluation

Roy Cameron, Sharon Campbell

Background and aim. Infrastructure is needed to integrate research, policy and practice in population based chronic disease prevention. The Centre for Behavioural Research and Program Evaluation (CBRPE), along with other non-government and government partners, is co-creating this infrastructure in Canada. Methods: The Centre for Behavioural Research and Program Evaluation is a program of the National Cancer Institute of Canada with funding from the Canadian Cancer Society. It is based at the University of Waterloo in Ontario Canada, and is funded ($11.2 M/5 years) "to build capacity for, and to conduct, social and behavioural studies that contribute to improved cancer prevention and care at a population level." CBRPE works with other organizations to build pan-Canadian assets that enable researchers and research users across Canada to generate and use evidence to guide population level intervention in chronic disease prevention.
Results. With partners we are developing a coherent set of assets: (a) (inter)national and regional research and knowledge exchange networks, (b) research and knowledge exchange training programs, (c) local data systems (including the School Health Action Planning and Evaluation System), (d) a Best Practices system supporting practitioners, (e) a model funding program that enables research aligned with policy and practice (Canadian Tobacco Control Research Initiative), (f) new models for integrating research with policy and practice.
Conclusions. International review committees assessed the approach as "unique in the world" and "at the leading edge" of research and knowledge translation.

Partnership and Networking

24
HEPA Europe - The European network for the promotion of health-enhancing physical activity: a new contribution to address physical inactivity and sedentary lifestyles
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30 minutes of daily moderate physical activity considerably reduce the risk of major chronic diseases. Also activities such as regular cycling or walking that can be integrated easily into daily life can already provide for the necessary level of activity. However, around one quarter of the population of the WHO European Region does not reach this level, which is estimated to cause 600'000 deaths per year. The health sector has recognized this threat to public health: New strategies and partnerships across different sectors have been sought to tackle the challenge, as highlighted in particular in the Global Strategy on Diet, Physical Activity and Health and in the resolution on Health Promotion and Healthy Life-styles adopted by the World Health Assembly in 2004. At the same time, there is wider support for the health arguments coming from other sectors. For example, transport and urban planners are looking with increasing interest at the wider benefits which can accrue from increasing cycling and walking. In fact, not only does it contribute to being physically active but it also has positive effects on road safety and emissions.
HEPA Europe: making health knowledge available across sectors to foster change. HEPA Europe works for better health through physical activity among all people in the WHO European Region, by strengthening and supporting efforts to improve the conditions for healthy lifestyles. HEPA Europe makes key health knowledge available at the service of change through:
- bringing together institutions and organizations from all over Europe;
- contributing to the development and implementation of national policies and strategies for the promotion of HEPA;
- promoting and facilitating multisectoral approaches for the promotion of HEPA; and
- promoting and disseminating innovative HEPA strategies, programmes, approaches and other examples of good practice.

25
EuroPharmForum NCD-pharmacy programs
Eeva Teräsalmi

Background and aim. WHO-EuroPharm Forum is a joint network of national pharmaceutical associations and WHO/Europe. The mission of EuroPharm Forum is to improve health in Europe according to priorities set by WHO and strenghten all aspects of the pharmacists contribution to public health in Europe. In the area of NCDs the Forum has developed model programmes for pharmacists in diabetes care, hypertension management, smoking cessation and asthma services. The aim of these programs is to give tools for national pharmaceutical associations to develop their own programs, educate pharmacists in these disease areas and collect information about pharmacists actions.
Methods. The specific pharmacy –programs are based on general disease management programs like CINDI, St. Vincent declaration and tobacco-programs. The idea is to identify areas where the work by pharmacists may contribute to better results in the care. Pharmacies are visited by almost everyone. This gives a good possibility to raise general awareness of health hazards and risk factors. The refilling of prescriptions give a very good possibility to follow long term therapies. This is important because a specific problem in the disease management of NCDs is the poor adherence. The most suitable working methods for each disease area are selected in the task forces run by the Forum and tested for their reliability and validity.

Results. The programs developed by EuroPharm Forum have been accepted well by national pharmaceutical associations and are run in most of the member countries. The forum collects regularly information of the implementation and of the results of these programs.
Conclusions. The costs of NCDs are raising rapidly. With good public information and economical and rational medical therapy these costs could be reduced considerably. EuroPharm Forum model programs give good tools for pharmacists to contribute in producing better results of NCD-therapies.

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Mind Your Heart: Partnership and Capacity Building with Media in Poland

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"Mind Your Heart" (MYH) is a nationwide education project implemented in the frame of the National Cardiovascular Diseases Prevention (CVD) and Treatment Program POLKARD 2003-2005 financed by the Ministry of Health. The main aim of it is to improve still inadequate knowledge of Polish society about risk factors, methods of early diagnostics and effective prevention of CVD. The campaign covered by the project uses five channels to communicate with the public: TV and radio educational spots and programs, press publications, internet communication www.pamietajosercu, public outdoor events like celebration of the World Heart Day and the Valentine Day and leaflets distribution. Organizing press conferences, production of press releases and bulletins are the methods employed to attract journalists- main partners in the project. Data from media monitoring indicate that only in last quarter of 2004, 244 press articles or messages concerning CVD prevention, including those in most popular and prestigious Polish magazines and newspapers has been published and they could reach about 100 millions of readers. Since January 2005 advertising health spots produced within the project have been broadcasting 3-5 times every day, free of charge, in all programs of national TV (TVP) and in popular radio station (PR I). According to the media monitoring data, 84% of the target audience (aged 16-49) watched the TV spots at least once just in first 12 weeks of the campaign. The partnership with national Polish TV and National Polish Radio supported by the formal agreement on cooperation results in a unique opportunity to employ the advanced social marketing methods for the campaign's purposes. A shared vision, credibility of partners, inter-sectoral action and effective communication can be thought as the key factors for a successful nationwide intervention with media.

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Strategic Partnership between the Finnish Heart Association and Diabetes Association

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Finnish Heart Association
Tor Jungman, Jorma Huttunen, Leena Etu-Seppälä
Finnish Heart Association and Diabetes Association

Background and aim. Strategic partnership means close and longstanding cooperation with organisations with complementary profile and resources without supremacy. The medical basis lays in the fact of two thirds of type 2 diabetics suffering or dying from cardiovascular diseases. Recent data from Euro Heart Survey on Diabetes and the Heart show that from current patients with a new myocardial infarction only one out of three has normal glucose regulation.
Methods. Partnership has been consciously built stepwise with meetings and working seminars. Diabetes Association was involved in developing the Action Plan of Heart Association in 1997 and Heart Association was involved in the Development Programme for the prevention and Care of Diabetes (DEHKO) in Finland 2000-2010 and Implementation Project of the Programme for the Prevention of Type 2 Diabetes (FIN-D2) in Finland".
Results. Heart Symbol-system as a marker for healthy nutritional choices has been launched together. A small decision a day-project aims at giving information and practical tools for permanent lifestyle changes by training health care providers supported by an information campaign and internet pages. The third component is Self-Help-group activity designed for laymen. Both associations had members in the Adviser Committee on Cardiovascular diseases and Diabetes for the National Public Health Institute. Currently we are sharing 50 year jubilee with a seminar at high political and expert level. Recently the Finnish Stroke Association has participated in the work of "the artery group" and all three associations have signed the European Cardiovascular Prevention guidelines together with the national medical organisations of different specialities. As results of the partnership we have more coordinated activities supporting each other in practice and in communication. Activities mentioned above are used within both associations and in health care.
Conclusions. Partnership has resulted in better chances for financing of activities. Together we are stronger and more influential. Implementation of common projects has led to permanent activities. In the future roadmap we acknowledge the independence of the associations, respect of each identity and realize that there are specific features, as well.

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The Role of the WHO Countrywide Integrated Noncommunicable Diseases Intervention (CINDI) Network in Chronic Disease Prevention: Experience in Georgia

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Background and aim. Chronic noncommunicable diseases (NCD) are the main contributors in the existing health inequalities between Georgia and western Europe. The burden on society caused by these diseases is even greater during periods of economic crises and structural reform. These factors are often associated with a lack of financial resources as well insufficient attention to NCD prevention. It was considered beneficial to join CINDI since it provides models to reduce NCD in countries with various socio-economic conditions.
Methods. Cardiovascular disease (CVD) was defined as a target disease for the CINDI-Georgia programme. A multifactorial approach to NCD prevention was adopted. Guidelines and methods of intervention were developed. Special attention was given to situation analysis, coalition building and resource mobilization. Baseline surveys were conducted and national and a national CINDI-Georgia protocol and plan of action was elaborated.
Results. Programme development and implementation included needs assessment, planning and coordination. A partnership between governmental health authorities, professional societies and NGOs was developed. Attempts were made to increase capacity in almost all intervention strategies – professional education, programme monitoring and evaluation, public education and policy development. The key accomplishments of the programme are: increased awareness of health professionals on an integrated approach to NCD; enhanced multidisciplinary collaboration; provision of evidence for the development of NCD prevention policy; improved professional training; and increased capacity to conduct interventions. The major value of participation in the CINDI network was increased programme credibility through association with WHO; and methodological support, tools, models and experience to implement NCD prevention projects. International collaboration facilitated the exchange of experience with other CINDI programmes. Key challenges for CINDI-Georgia are to obtain adequate financial resources, reorientate health services towards prevention and motivate the population for health behavioural changes.
Conclusion. The accumulation of knowledge and experience in integrated NCD prevention will be helpful in the formulation of a new national strategy of prevention and control of chronic diseases.

Role of Institutes

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An emerging infrastructure for integrating research, evaluation, policy and practice in population intervention at local, national and international levels

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There is an urgent need for evidence to guide population level intervention for primary prevention of chronic disease. The Canadian Cancer Society and National Cancer Institute of Canada's Centre for Behavioural Research and Program Evaluation (CBRPE) is building an (inter)national infrastructure, analogous to a clinical trials network, to support population level intervention research, evaluation, and knowledge exchange. This involves building capacity that enables leaders in research, evaluation, policy and practice to work together to integrate research and evaluation with policy and practice (e.g., to study natural experiments as new policies and programs are implemented). The goals are to (a) continuously "learn as we go" what works, in what context, and (b) apply what we are learning, to continuously improve practice. The presentation will describe our systems, structures, successes, and challenges, based on experience to date. This experience includes development of (a) data collection and feedback systems to enable planning, evaluation, research, and evidence based intervention at the level of community settings (e.g., schools), provinces, and countries, (b) networks to support creation and use of these data systems to improve public health practice, and (c) a "best practices" system to guide adoption of evidence based interventions. This infrastructure is creating capacity within the public health system to generate and use evidence in public health practice. The work is guided by a vision for integration of research, policy and practice developed though the Chronic Disease Prevention Alliance of Canada, the Canadian Institutes for Health Research, the Public Health Agency of Canada, and CBRPE.

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The role of Estonian National Institute for Health Development in the prevention of cardiovascular diseases

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National Institute for Health Development

The purpose of this paper is to describe how the implementation of the Strategy to Prevent Cardiovascular Diseases (CVD) is organized in Estonia and to present the role of a national institute in it. National Institute for Health Development (NIHD) is a national research and development agency administered by the Ministry of Social Affairs (MSoA). National Strategy to Prevent CVD was developed by several organizations under the coordination of Estonian Heart Association and the MSoA in 2004. NIHD developed a monitoring and evaluation plan and a result sheet that presents the results that must be achieved by the end of each quarter and year of the strategy. NIHD together with the MSoA and Ministry of Internal Affairs (MInA) formed a group of experts including health promotion

specialists and County Government (CC) representatives. This group developed a concept of county health councils (CHC). According to this concept each CC had to sign the contract with NIHD, that provides funding for the development of a CHC and a methodological health cabinet (MHC) under it. Each CC hires a health promotion specialist who works in the MHC, implements and coordinates all health promoting activities, especially related to CVD prevention at the local level. CHC includes representatives from Local Governments, schools, police, NGOs etc. In this way a good vertical top-down cooperation structure and also a horizontal structure at the local level was established. On the national level the Strategy to Prevent CVD is coordinated by the Governmental Council that includes representatives from MSoA, MInA, Ministries of Culture, Education & Science, and Agriculture. The role of this council is to supervise and evaluate the activities performed by all ministries in the area of CVD prevention. Thus a horizontal cooperation and coordination structure has been developed also at the governmental level. NIHD also performs regular health behavior studies of adults and children, that contribute to the evaluation of the impact of the strategy.

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Heart of Mersey: Applying the lessons of North Karelia in Greater Merseyside, United Kingdom

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Heart of Mersey
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Background and aim. eart of Mersey (HoM) is a coronary heart disease (CHD) prevention programme in Greater Merseyside, United Kingdom.
Methods.The intervention aims to reduce CHD across a 1.7 million population. The programme focuses on creating a healthier environment to make it easier to make healthier lifestyle choices. HoM has maintained an active relationship with the North Karelia programme following visits to Finland in 2001 and September 2005 (the latter intended to influence decision makers). A baseline survey has demonstrated higher levels of serum cholesterol and prevalence of smoking than in the rest of the country. A Food and Health Strategy has been produced with key targets of improving the diet of children, ensuring public sector procurement addresses health issues and the development of a Food Charter for local food outlets. The HoM Smoke Free programme is supporting local legislation as well as lobbying for stronger national legislation. HoM's work is underpinned by a programme of social marketing which seeks to win the support of key decision makers as well as the public. HoM is being evaluated in conjunction with the University of Liverpool.
Results. HoM was launched in June 2003. Its key objective in its first two years was to secure funding and high level support for the intervention. Annual funding exceeding £500,000 has been achieved and we are progressing in our objectives to reduce CHD. As mortality rates will only fall gradually, proxy measures such as cholesterol levels, smoking prevalence and dietary changes will also be used to evaluate the programme.
Conclusion. The Heart of Mersey Programme suggests that the lessons of North Karelia and Heartbeat Wales are still applicable in the twenty-first century. As always, quick fixes and short-term funding will not achieve immediate results and a more considered comprehensive long-term approach remains essential.

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Key Elements of Successful Chronic Disease Prevention Programs in the United States

Randahl Kirkendall
Partnership for Prevention

Partnership for Prevention is a non-governmental organization that received funding from the United States Centers for Disease Control and Prevention to identify strategies for states and communities to improve their chronic disease prevention efforts. Three state health departments (North Carolina, Texas, and West Virginia) and four metropolitan health departments (Alameda County, Austin City/Travis County, Boston, and Contra Costa County) were the subjects of in-depth case studies. We examined factors for partnerships, community engagement, policy advocacy, data management, planning, and integrated efforts. Based upon the findings of the case studies, a technical assistance program was developed and provided to four pilot state health departments (Arizona, Kansas, Nevada, and Rhode Island). The technical assistance helped states to identify gaps in prevention efforts and to develop strategies for addressing priorities within an integrated framework. This session will present key elements for successful chronic disease prevention programs identified by the project. Particular emphasis will be on those elements that promote comprehensive and integrated approaches including communication, dedicated staff time, a champion, leadership support, shared goals, and agreement on the scope of integration.

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Sustained community based prevention of CVD: From North Karelia Project to North Karelia Center for Public Health

Vesa Korpelainen
North Karelia Center for Public Health

The North Karelia Project (NKP) was launched in Finland in 1972 in response to the local petition to get urgent and effective help to reduce the great burden of exceptionally high coronary disease mortality rates in the area. The NKP became the first major community-based project for CVD prevention and health promotion. Action was based on intersectoral activity, community organization, people's participation and long term sustained work.A sustained process of implementation

of the preventive programme took place 25 years with continuous evaluation and depending of social change. In 25 years a remarkable decline took place in the population levels of risk factors (RF) followed by decline in disease and mortality rates, CHD mortality being more than 80 % lower than in the beginning of 70's. Analysis have shown that most of the decline in CHD mortality can be explained by the change in the target RFs. Associated with favourable risk factor and lifestyle changes the general health status of the people has greatly improved.Although the decline in CHD mortality and improvement of health has been great there is still much to do. Most important future health challenges regard to diet, physical activity and smoking. Active community based work continues in North Karelia under new organization, North Karelia Center for Public Health (NKCPH). The experiences of the NKP are applied. The ongoing activities of NKCPH are connected to infrastructure of health promotion in collaboration with communities, RFs (smoking, physical activity, diet and overweight) and health gap between sosioeconomic groups. The key elements for success in future will be similar than during the NKP: (1) Planned, theory-based and well implemented programme, (2) Intersectoral collaboration, partnership and community involvement, (3) Flexible and evolving intervention supported by monitoring and (4) Public policy and involvement of media and business.

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The International Association of National Public Health Institutes (IANPHI) – Improvement of world's health through new collaboration

Pekka Jousilahti
National Public Health Institute - KTL, Finland, and the International Association of National Public Health Institutes - IANPHI

Many countries have found the critical mass of skills and knowledge that can be developed in a National Public Health Institute (NPHI) to be crucially important in dealing with the health problems in a population and community.
Globalisation is as applicable to health issues as to those of trade and economics. The increased frequency of travel, distribution of goods, migration, spread of communications and marketing of new lifestyles have promoted a set of risks and health challenges shared by all countries of the world. Not only microbes, but also other health threats cross the borders nowadays. Two major causes on non-communicable diseases, tobacco smoking and unhealthy diet are good examples of global health threatening issues.
Close international collaboration is essential for public health protection and tackling the future health threats in the world. The directors of 25 NPHIs, representing both developing and developed countries, met first time in Italy in 2002, and the group reconvened in 2004 in Finland and declared its intention to establish an International Association of National Public Health Institutes (IANPHI). The Association will be formally launched in Brazil at the beginning of 2006. The domain of the new association will include mechanisms for swift and clear communication between members, joint training activities, collaborative research projects, and mutual assistance on wide variety of public health issues such as surveillance and outbreak investigation. In an increasingly globalized world, international collaboration between NPHIs is vital for success in any country and for global public health.

Plenary: Integration

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Health in all policies

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Public Health Agency of Canada

The Alma Ata declaration and the Ottawa Charter for Health Promotion reinforced our understanding that some of the most influential action to create and sustain health is by sectors other than health. They also reinforced that policy is a powerful instrument for health – at local, regional, national and international levels. Further, health outcomes will be most positive if policies across sectors and across jurisdictions are complementary and synergistic. As a result, hallmarks of public health, and vital to integration, are intersectoral and interjurisdictional action. These hallmarks have profound implications for public health. To name a few, public health needs to figure out how to embrace a stewardship role; how to develop and act within collaborative governance models, networks and other strategic alliances; how to co-create shared accountability frameworks; and how to support a multi-disciplinary and international research agenda on policy implementation and impacts. Not all of these directions are new. The last 30 years offer many experiences from which to learn, such as Healthy Cities and the WHO CINDI program. Creative, rigorous and timely synthesis of such experiences will help us plan for the future, and move towards health in all policies – a vision of successful integration.

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National Program on Food and Nutrition Policy in Slovenia – a case for integration of health in others sectors policies

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Background. In Slovenia cardiovascular diseases (CVD) are the cause of nearly 40% and cancers 26% of all deaths. Nutrition has an important causal role in chronic diseases morbidity and mortality. Half of Slovene population has unhealthy eating habits with big differences among age, sex, social groups and regions. Food choices depend on many factors and different policies can influence nutritional habits. Slovenia faced the need for comprehensive Food and Nutrition Policy

(FNP) and at the same time the integration into EU with potential negative influences of Common Agricultural Policy (CAP) of EU on nutrition and public health of Slovenians.
Methods. Initial activities of FNP development which started in CINDI Slovenia in 1998 were continued by Ministry of Health (MH) in 2001 as an intersectorial and interdisciplinary process supported by public and private sector. Thorough analysis of all elements of food chain was carried out to recognize problems and to find solutions. Health Impact Assessment (HIA) of the influence of CAP of EU on Slovenian FNP and people's health was carried out in partnership with WHO and international experts to avoid unfavorable influences on public health after accession to EU.
Results. A comprehensive National Program (NP) of FNP from 2005-2010 adopted in March 2005 by the Parliament resulted from longstanding intersectoral and interdisciplinary process. Strategies to secure food availabilities and support local sustainable development and procurement, to support healthy food choices in different environments and for different populations groups, to develop curricula for nutritional education at different levels and different audience, to develop nutritional standards for different population groups were agreed and included into the NP for FNP. Recommendations resulted from HIA of CAP of EU were also included into the FNP.Conclusions. Slovenian NP of FNP is a good example for integration of health in others sectors policies.

POSTER PRESENTATIONS

Sociodemographic differences in diet and risk factors

P1
Influence of education level on Index Body Mass in Yakutia
Korniljeva I, Ivanov K
It is usually listed that the risk factor of cardiovascular illnesses is overweight. At once some researches showed that death by ischemia of heart could be associated as weight gain or its loss. The paper presents the results of single-step representative research among population of 8 regions (towns) of the Republic of Sakha (Yakutia). Totally 1554 households or 3135 people (aged above 15) were examined (1376 males and 1759 females). Average age of examined people was 40.6±0.29. Indigenous population (Yakuts, Evens, Evenkys) prevailed in the research – 70.5%. 19% of examined have high and incomplete high education, 37.6% - specialized secondary education, 22.6% - general secondary education, 12.6% - junior secondary education, 3.4% - basic vocational education, 5% - basic education. In general 24.5% of males and 19.2% of females have the education below specialized secondary one, and 16% of males and 20.4% of females have the education above it. Females' educational level is higher than males'. The body weight was estimated by Index Ketle (IK). Depending on total mortality risk all examined people were classified in five groups, when IK is 21.0; 21.0-24.0; 24.1-29.0; 29.1-31.0 and above 31.0. There wasn't found any firm association between average meaning of IK and males' educational level.

P2
Insuline resistance and socioeconomic status among children from Estonia, Denmark and Portugal
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Background and aim. Adverse childhood socioeconomic position (SEP) is associated with increased risk of coronary heart disease in later life and can be mediated by the insuline resistance (IR). The aim of this study was to examine the association between IR and SEP in children of Denmark, Estonia and Portugal. The second aim was to find some explanation for the results found in Estonian children.
Methods. The participants were 3189 randomly selected school children. IR was assessed from blood glucose and insuline as homeostasis model assessment (HOMA). SEP of children was assessed by parental questionnaires as parental education and the income per one family member.
Results. Parental education and family income were inversely associated with IR in Danish children, whereas in Estonian and Portugal children the opposite was found. In Denmark, insulin resistance was 24% lower in children whose fathers had the most education compared with those with the least education. In Estonia IR was 15% and in Portugal 19% higher children with most educated fathers. These associations remained after adjustment for a range of covariates. In Estonia a difference between SEP was found in dietary habits. Although children of most educated parents made more often healthy dietary choices, there were more participants of low educated fathers who did not consume French fries

and pizza. Such a result can be explained by the limited access of those families to such food. We also found that the birth weight of children of most educated fathers was 200 grams lower than in others. Low birth weight has been associated with higher IR in later life.
Conclusions. Health inequalities are dynamic, change over time and countries. The study shows that there are gaps in understanding the development mechanisms of health inequalities and the interpretation of the results must not be too simplistic.

P3

Ten years trends in obesity and dietary habits in relation to social determinants in Lithuania

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Background and aim. Diseases associated with obesity have the greatest impact on public health in Lithuania. During the last two decades the tremendous socio-economic changes have occurred in the country that influenced nutrition habits of population. The aim of the study was to analyse the time trends in diet and obesity in different social groups of Lithuanian population in 1994-2004.
Methods. Since 1994 six cross-sectional surveys have been conducted among adult population aged 20-64 within the international Finbalt Health Monitor project. An independent national random sample of 3000 inhabitants of Lithuania was drawn from National Population Register for each survey. The data were collected through mailed questionnaires.
Results. Since 1994 the prevalence of obesity (BMI>30 kg/m2) increased from 10.6% to 14.2%. After adjusting for age, education and place of residence the likelihood of being obese increased by 1.11 (95% CI 1.05-1.17) for every 2 years of study period. The increase in obesity was higher among highly educated men and those living in cities, compared to low educated men and rural inhabitants. The tendency of decrease in prevalence of obesity was observed among women, however, the trends were not statistically significant. Over a period of ten years nutrition habits of Lithuanians changed substantially. The intake of animal fat decreased. Almost a half of population replaced butter on bread by low fat margarine. The proportion of persons using vegetable oil for cooking increased more than twice. The positive trend in consumption of fresh vegetables and fruits was observed. The increase in usage of vegetable oil for cooking and decrease in usage of butter on bread was larger among low educated persons and inhabitants of rural areas. Urban population showed much larger changes in consumption of fresh vegetables.
Conclusion. The changes in nutrition habits have occurred in all groups of population but social differences in diet and prevalence of obesity have remained in Lithuania.

P4

The role of family, school and lifestyle factors on maintenance of normal weight

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Background and aim. Very few studies have examined factors associated with the maintenance of normal weight. The aim of this follow-up study was to examine the role of family, school and lifestyle factors on maintenance of normal weight from adolescence to adulthood.
Methods. All 16-year old students in the city of Tampere completed a questionnaire at school in 1983. This study includes the participants (694 girls and 582 boys, 60% of original population), who were followed up using a postal questionnaire at age 32. In multivariate model, analyses of adolescent factors were adjusted for age at menarche, BMI and social class at age 16, and analyses of adulthood factors for age at menarche, BMI at age 16 and education at age 32.
Results. At age 32, 76% of women and 56% of men had maintained normal weight (BMI<25 kg/m2). Women who had better school performance (OR 1.77; 95%CI 1.03-3.03) at age 16, were employed (2.29; 1.08-4.89) and had university (2.90; 1.15-7.28) or polytechnic (2.81; 1.22-6.49) education at age 32 were most likely to maintain normal weight. Men who spent time with friends less frequently than daily (1.72; 1.06-2.81) at age 16, were single (1.63; 1.02-2.61) and unemployed (2.46; 1.16-5.23) at age 32 maintained normal weight. Heavy alcohol use (1.71; 1.16-2.51) at age 32 was associated with greater risk for obesity in men. No association was found between normal weight maintenance and watching television, attending physical activities or social class at age 16.
Conclusion. In this study, school performance, education and employment in women and being single and unemployed in men seemed to predict maintaining normal weight. In men spending time with friends daily in adolescence and being a heavy alcohol drinker at age 32 were risk factors for overweight at age 32.

P5

Socioeconomic differences in vegetable consumption are decreasing in Finland

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Background. Studies from different time-periods have shown that daily consumption of vegetables is more common among those with higher socioeconomic position and among women compared to men. Only a few studies on trends of socioeconomic differences in vegetable consumption exist and even a smaller number involve several indicators of socio-economic position. Our aim was to find out whether socioeconomic differences, measured with several indicators, in vegetable consumption have increased, decreased or been stable over the last two decades among Finnish men and women.
Methods. Data on daily fresh vegetable consumption were derived from annual surveys performed among representative samples of 5000 Finnish working aged (15-64) population. The data from the years 1979-2002 were linked with data on education, occupational class and household income based on Statistics Finland Register Data. Those under 25 and all students were excluded giving the total of 69383 respondents. Main analyses were conducted with logistic regression.
Results. Daily consumption of fresh vegetables became more prevalent during the study period. It was consistently more common among those with higher education, occupational class or income during the whole study period. Socioeconomic differences in vegetable consumption decreased since 1979 on all examined indicators among both men and women.
Conclusions. Higher socioeconomic position is associated with more frequent daily consumption of fresh vegetables. Women with high socioeconomic position were initial trend setters but the prevalence of daily consumers of vegetables in these groups has not increased anymore since the beginning of 1990s. The prevalence of daily consumption of fresh vegetables has increased in the other population groups during 1990s leading to decreased socioeconomic disparities. If the trend is maintained socioeconomic differences in vegetable consumption will continue to decrease and subsequently disappear as has previously happened with socioeconomic differences in fat intake in Finland.

P6

The associations between recommended food habits and multiple dimensions of socio-economic status

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Background and aim. Socio-economic inequalities in health behaviours are well-established. Most studies on socio-economic differences in food behaviours have focused on only one or few indicators of socio-economic status. Less, however, is known about the role of multiple socio-economic indicators in following recommended food habits. Our aim was, therefore, to examine the associations between nationally recommended food habits and socio-economic status indicators from childhood circumstances to adult socio-economic class and economic situation.
Methods. These data derive from postal questionnaires in 2000-2002, sent to employees of the City of Helsinki (n=7984, 80% women, response rate 67%). Socio-economic status was assessed by eight indicators: parental education, childhood economic difficulties, own education, occupational class, household income, home ownership, current economic difficulties, and economic satisfaction. The associations between food habits and socio-economic status were examined by sequential logistic regression models, adjusted for age and marital status.
Results. Among women, all current socio-economic status indicators were associated with recommended food habits. When these indicators were simultaneously adjusted for, the associations diminished, but own education, occupational class, high income, and economic satisfaction remained associated with food habits. Among men, parental and own education, occupational class, home ownership and current economic difficulties were individually associated with recommended food habits. All except own education and occupational class remained associated with food habits in the mutually adjusted models.
Conclusions. All studied socio-economic status indicators were associated with recommended food habits. Childhood circumstances were not associated with food habits for women, whereas parental education remained associated with food habits among men. Furthermore, among men, reporting no current economic difficulties was strongly associated with recommended food habits, whereas among women, the associations between socio-economic status and food habits were rather weak. In nutrition counselling and health promotion programmes focusing on improving diet, multiple dimensions of socio-economic status need to be considered.

Smoking and Drinking in Adolescence

P7

Tobacco smoking among children of primary schools of Kaunas (Lithuania)

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Background and aim. Tobacco smoking in Lithuania is spreading in the group of young people and

adolescents, especially girls. The aim of our study was to analyze the development of addictions regarding tobacco smoking.
Material and methods. We have interviewed 522 pupils in 40 schools of Kaunas. Simultaneously the parents of the 434 3rd formers were surveyed.
Results. The parents were asked some questions regarding their first formers' addictions. Their answers showed that they were more strict in tobacco smoking habits than in alcohol consumption. 5.0% of the third formers gave positive answers to the question "Have you ever attempted to smoke?" (1,8% of girls and 7,4% of boys). We have enquired how old the children were when they smoked the first cigarette. 0,5% of girls and 2,7% of boys attempted to smoke at the age of seven; 1,4% of girls and 4,7% of boys – at the age of eight. If none of the parents smoked 7,3% of girls and 17,3 of boys said that they were going to smoke in the future. If one of the parents smoked, 13,4% of girls and 33,3% of boys respectively said that they were going to smoke. If both parents smoked, 20,0% of girls and 42,9 % of boys said they were going to smoke. The children attempted drinking alcohol earlier than smoking. The question "How old were you when you had an alcoholic drink for the first time?" was answered as follows: 12,6% of the children (8,6% of the girls and 15,6% of the boys) have drunken alcohol at the age of seven or younger. 28,5% of children (24,3 of girls and 31,6% of boys) have tried alcohol at the age of eight.
Conclusions. Tobacco smoking attempts were made rather early. Parental role had a considerable influence on the children decision regarding tobacco smoking in the future.

P8

Divergence between health policy and displayed behaviour among adolescents in the Republic of Karelia, Russia

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In order to be efficient, health promotion programs need to be implemented through national health policies. Prohibition of tobacco and alcohol sales to children under certain age and restrictions of consumption in public places are important compounds of health politics. Present study aims to assess the tobacco and alcohol consumption and factors reflecting the implementation of alcohol and tobacco legislation and policies among youth in the Republic of Karelia in Russia. Surveys on CVD risk factors and health behaviour was conducted among population of 15-16 year old students in Pitkäranta district in the Republic of Karelia in 1995 and 2004. Set of questions aimed to reveal access to alcohol and tobacco and the prevalence of smoking and the frequency of alcohol consumption. The results showed rise in alcohol consumption in both genders. The amount of daily smokers had doubled among girls from 7% in 1995 to 15.4% in 2004. Among boys 30% in 1995 and 53% in 2004 had experiences in alcohol consumption on sixth grade or earlier. The prevalence of boys reporting that it is easy to acquire alcohol increased from 55% in 1995 to 91 % in 2004. Among girls the respective rates were 60% in 1995 and 73% in 2004. In 1995, over 20% of girls and in 2004 over 60% were buying themselves alcohol. Among boys the respective rates were 44% in 1995 and 77% in 2004. The proportion of girls acquiring their tobacco products themselves increased from 16% in 1995 to 35% in 2004. Smoking at schoolyard was quite easy for 41% girls in 1995 and for 55% in 2004. The results show that exposure to alcohol and tobacco happens early and has increased between 1995 and 2004. Despite of existing alcohol and tobacco legislation and policies, it is easy for adolescents in the Republic of Karelia to get alcohol and tobacco products and to consume those in public places. These facts request immediate consideration and establishment of action to follow-up and control the implementation of health policies and legislation.

P9

Prevalence of Alcohol Use Among Youth and Exposure to Advertisements and Promotions in the Philippines 2004

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Objectives. The 1st Global School-based Student Health Survey (GSHS) aims to establish baseline data of risk behaviors among students comparable with other parts of the region, across regions worldwide, and to provide basis for assessment of existing youth programs, prioritize interventions for effective development of desirable youth in the country.
Methods. The GSHS is a school-based survey conducted among students aged 13 to 15 years old. It measures behaviors and protective factors related to the leading causes of mortality and morbidity among youth and adults, alcohol use among others. About 7,338 questionnaires were completed in 148 schools.
Results. The prevalence of current alcohol drinking among 13-15 years old is 18.2%. The boys (23.3.6%) were significantly more likely than girls (14.9%) to report current alcohol use; Two in five (40.0%) students have seen a lot of advertisements, promotions for alcohol in newspapers or magazines during the past 30 days preceding the survey. Almost one-third (31.7%) have seen a lot on billboards. About one-third (30.0%) of students saw alcohol brand names most of the time when they watched sports events or other programs on television. About one-third (30.8%) of students saw actors drinking alcohol most of the time when they watch television, videos, or movies. Over one in ten (12.3%) saw advertisement for alcohol most of the time when the go to sports events, fairs, concerts, community events or social gatherings. One in ten (9.9%) students had been offered a free drink of

alcohol by an alcohol company representative. Almost one in five (16.1%) students has something such as t-shirt, pen, backpack, or other item with an alcohol brand logo on it.
Conclusions. Exposure to advertisements and promotion of alcohol use is moderately high to influence future starters and potential regular drinkers. Regulation of promotions should be fully enforced.

P10
The anti-smoking project for youth "Mr Starbene ed il Club dei Vincenti": preliminary evaluation
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"Mr Starbene ed il Club dei Vincenti" is an antismoking program for fourth and fifth grade children; the program's primary objective is the orientation towards an healthy and smoke-free lifestyle through training teachers and involving parents in smoking prevention. All the enrolled teachers are trained by attending a couple of "two-hours" sessions about smoking-related health issues and how to use the program's materials and tools. This activity was done with the partnership of the Regional School Administration. The program, lasting two years, is implemented through some plays to be held both at school and at home. In 2005 the program was evaluated on 5.856 nine years old children, coming from eight Lombardy areas and representing the 12.8% of the whole fourth grade population of the Region. The enrolled population was splitted into two comparable groups (treated and controls) for a statistical evaluation. Final analisys showed that, after a two years activity, the current smokers in the treated group were less than in the control group (0.1% vs 0.2%). On the other hand, significant results were found about perceived smoking hazards: 88.8% of treated group children declared that smoking can cause diseases vs 84.7% of the control group; besides those who considered smoking as a "non-dangerous" were less in treated children (3.4% vs 5.3%, p=0.000). Finally, children that declared they won't smoke in future decreased by 60% in treated vs only 16% in controls (p=0.000); the same trend has been found considering children that would accept an offered cigarette (-18% treated vs –15% controls). The evalution of this project is still going on but these preliminary results show a good effectiveness of "Mr Stabene ed il Club dei Vincenti" mostly on the smoking hazard knowledge and the intention to be a smoker in future.

P11
The effects of a three year smoking prevention program in upper levels of comprehensive schools in Helsinki
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Background. This study evaluates the effects of a three-year smoking prevention program in upper levels of comprehensive schools in Helsinki. The study is part of ESFA (European Smoking prevention Framework Approach), in which Denmark, Finland, the Netherlands, Portugal, Spain and the UK took part.
Methods: In Finland 27 upper levels of comprehensive schools participated in the program (n=1821). Schools were randomized to experimental (13) and intervention groups (14). The program included 14 lessons of information about smoking and refusal skills training. Smoking prevention was also integrated in regular subjects. Community program included parents, parish confirmation camps and dentists. The control group had normal school heath education classes.
Results. At the baseline students' average age was 13.8 and 52% of them were boys. Among baseline never smokers the program had a significant effect on onset of weekly smoking in the experimental group [OR=1.57 (1.11-2.20)] compared to control group. Being female, doing poorly at school, having parents who smoke and having more pocket money to use compared to others were associated with an increase likelihood of onset of daily and weekly smoking. Best friend's smoking increased likelihood of smoking escalation, but not smoking initiation among never smokers at the baseline.
Conclusion. This study shows that school and community based smoking prevention program can prevent onset of smoking among adolescents.

P12
Youth related smoking prevention in Estonia
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Background. In Estonia, 20% of all mortalities are the result of smoking. About 700 people in their working age die and about 1,5 million workdays are lost due to smoking. Recent studies show that smoking experience is widely spread among 13-15 years old adolescents in Estonia, more than one third of boys and girls being current smokers. The gravity of these findings is strengthened by the fact that more than half of the current smokers are already addicted to tobacco.
Methods and results. A nationwide campaign was launched in 2004 aiming to: 1) inform students, teachers, and community members about the relation between tobacco and health; 2) tailor students attitudes towards addiction -free life as a regular standard; 3) create positive role models 4) activate young people to

participate in health-related activities. Activities: 1) education programme in schools grade 7-9 2) implementation of smoke-free school policy and motivation strategies (smoke-free class competition); 3) Youth oriented campaigns: a. a well-known rock band gave 20 concerts in schools all over Estonia. Members of the band served as positive role models being a smoke-free band; b. a movie "BE Tobacco FREE" was produced and shown nationwide in TV, plus all the schools received a videotape.
Conclusion. Youth-oriented campaigns appear to have strong potential to help reduce the youth smoking rates. The implementation of other concurrent tobacco control policies is important and youth campaigns could be successfully linked with school education, community involvement programs and smoking cessation counselling. A sustainable implementation of these measures over years is essential and therefore youth-oriented tobacco-free campaign, as part of a more comprehensive smoking prevention programme, is integrated into The National Strategy for Cardiovascular Disease Prevention for 2005-2020.

Public Health Modelling

P13
Healthcare effects of a tobacco tax increase in the Netherlands
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RIVM
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RIVM

Objective of this study was to evaluate the health effects and the effects on the costs of care if tobacco taxes increase. For western countries the price elasticity of total tobacco sales has been estimated at -.3 to -.5. This was decomposed into effects on tobacco use per smoker, start rates, and cessation rates, using relations between the elasticities to find consistent estimtes. The recent tax increase of 20% in the Netherlands was evaluated with the RIVM chronic disease model. The model linked risk factor prevalence to disease incidence. Changes in the number of smokers over time were modeled using age and gender specific start, stop, and restart rates. Scenarios differed in their stop rates, which increased from the tax increase, and then gradually returned to their old level. As a result, the number of smokers and the incidence of smoking related diseases declined, resulting in additional life years and QALYs. The largest health effects were seen about 10-20 years after the tax increase. In the Netherlands, with 4.4 million smokers in a population of 16 million people, the net present value of savings in health care costs of smoking related diseases was 290 million euro and 70.000 life years were gained in the best guess scenario (discount rate 4%). Including costs for diseases unrelated to smoking resulted in a cost per QALY of 3000 Euros. Total costs and health gains were sensitive to the rate at which the effects of a tax increase vanish, but cost-effectiveness ratios were not. From the healthcare perspective, tax increases are the cheapest smoking cessation intervention thinkable. Although this is clear, estimates of the total health effects would gain from better empirical data on the effect of price increases on cessation rates.

P14
Modeling potential impact of anti-tobacco policy on educational differences in life-expertancy
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Background. The Dutch Ministry of Health aims at reducing socioeconomic differences in life-expectance by 25%. The National Institute of Public Health (RIVM) estimated to what extent anti-tobacco policy could contribute to realisation of this target.
Methods. A computer simulation model, the Chronic Diseases Model (CDM), was used to estimate the effects of two scenario's. In the 'maximum scenario' the effects on difference in life expectancy between highest and lowest educational levels are estimated as if the prevalence of smokers in all groups were the same. This scenario is theoretical and estimates the maximum extent to which differences in life expectancy can be reduced by anti-smoking policy. In the 'realistic scenario' differences in smoking prevalences between highest and lowest educational levels halved over a 20-year period. The effects of the two scenarios were compared to a 'reference scenario', where smoking habits remained equal.
Results. In the 'reference situation' the difference in life expectancy at age 40 between persons with the lowest and highest level of education amounts to 5.1 years for men and 2.7 years for women. The prevalence rates of current smoking among lowest educated groups are 1,5 to 2,0 times higher compared to the highest educated groups. In the maximum scenario, the differences in life-expectancy are reduced to 3.6 years for men and 1.7 years for women (a reduction of about 30%). In the realistic scenario, the differences are reduced to 4.7 years for men and 2.4 years for women (a reduction of about 10%).
Conclusion. A 25% reduction in socioeconomic health differences, the Dutch policy target, can not be achieved by anti-tobacco policy only. Realising a realistic ambition, e.g. halving differences in smoking prevalences during a 20-year period, may reduce socioeconomic differences in life-expectancy by 10%.

P15

The Dynamic Regression Method (DRM) as a tool for evaluating the quality of the demographic data on population size

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Background and aim. The demographic data on population size (DPS) are widely used in health research, mainly as the denominator for different indicators. Hence, the accuracy of this data contributes directly to the accuracy of the resulting indicators. It was shown in the WHO MONICA project that such data often are of low quality. Surprisingly, up to now there is a blind believe in the quality of this data among health professionals. We have been concerned with checking consistency of the DPS and correcting the data whenever possible.
Data and methods. Samples of the demographic data are used submitted in some currently ongoing projects. The data are processed by DRM method providing estimates for population size for each age and calendar year and estimates of dynamic of population - changes of the population size along birth cohort (C-trend). Spontaneous and strong changes in the dynamics should indicate concern in data.
Results. The results are visualized by 3d figures. All peaks and dips of population size levels (but not of C-trends) follow the cohort lines. This is the first very strong message to all agencies and institutions using linear interpolation for interecensal estimates: this is simply wrong. The effects of improper age group aggregation was detected and corrected in one sample. The problem in census data has been identified in the other sample.
Conclusions. The DRM method is an effective tool for checking and correcting (if possible) of the demographic data on population size. This data component always has to be checked whenever it is used for health related estimates

P16

Modeling future impact of increasing prevalence rates of overweight

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Background. In the Netherlands, in the past decade prevalence rates of overweight increased and future increases are expected. The National Institute of Public Health (RIVM) estimated future health impact of this expected upward trend.
Methods. A computer simulation model, the Chronic Diseases Model (CDM), was used to estimate the effects of two scenario's. In the 'Trend scenario', the rising trend in the past is extrapolated to the future, and in the 'American scenario' it was assumed that the Dutch prevalence rate of overweight in 2024 is equal to the current prevalence in the United States. The effects of these two scenarios are compared to a 'status quo scenario', where prevalences of overweight and obesity do not change over a 20-year period.
Results. In 2024, the prevalence rate of overweight in the Dutch population, older than 20 years, is 48% in the status quo scenario, 59% in the Trend scenario and 65% in the American scenario. The effects on total mortality and morbidity are as following. Total mortality could increase by 1% in the Trend scenario and by 3% in the American scenario. The prevalence of myocardial infarction, cerebrovascular accident, and hip arthrosis could increase by 2 to 4% in the Trend scenario, and by 4 to 10% in the American scenario. In 2024, the prevalence of NIDDM could increase by 9% in the Trend scenario and by 19% in the American scenario. The cumulative number of additional NIDDM patients during a 20-year period is 89,000 in the Trend scenario and 192,000 in the American scenario. More than 25% of these additional patients are younger than 50 years.
Conclusion. When the trend in the past is extrapolated to the future, in about twenty years almost 60% of the Dutch population is overweighted and almost 20% is obese. This situation would still be better than current prevalence rates in the United States. Preventing the expected upward trend could considerably decrease the prevalence of obesity-related diseases, especially NIDDM, in 2024.

P17

How much of the cardiovascular disease burden can be attributed to unhealthy dietary habits?

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Objective. To estimate the burden of cardiovascular diseases (CVD) attributable to unhealthy dietary habits with respect to saturated fat (SF), trans fatty acids (TF), fish, fruit and vegetables in the Netherlands and to estimate the effect of a favorable change in diet.
Methods. We used a multistate transition model (computer simulation model), containing data on demography, dietary intake (by gender and 5-year age group), disease prevalence data, mortality data and relative risks of the dietary factors for different diseases. The disease burden attributable to unhealthy dietary habits was estimated in a scenario where optimal dietary habits for the whole population were assumed, defined as intake levels according to the present guidelines (SF <10 en%, TF <1 en%, fish at least once a week, fruit >= 200 grams/day, vegetables >= 200 grams/day). Furthermore, the effect of improved dietary habits (SF <12 en%, TF <1.3 en%, fish 2-4 times a month and both fruit and vegetable intake increased by 50 grams/day) was estimated. In

this abstract cumulative CVD incidence and mortality over a 20-year period and gain in life expectancy are presented for the 5 dietary factors combined.
Results. Over a 20 year period, 23% of CVD incidence (about 930.000 cases) and 18% of CVD mortality (about 165.000 cases) is attributable to unhealthy dietary habits, as is a decrease in life expectancy of 1.2 years. Dietary improvements (specified above) would reduce incidence of CVD by 13% (500.000 cases), CVD mortality by 10% (88.000 cases) and would increase life-expectancy by 0.6 years. Health effects of the dietary factors separately will be discussed.
Conclusion. About a quarter of the total number of CVD deaths in the Netherlands can be attributed to unhealthy dietary habits. The resulting loss of life expectancy is comparable to the health effect of a scenario in which smoking is eliminated.

P18
Impact of obesity on the cardiovascular disease burden: How much can be prevented?
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Objective. To estimate the burden of cardiovascular diseases (CVD) and diabetes mellitus (DM) attributable to overweight (Body Mass Index (BMI) 25-29.9 kg/m2) and obesity (BMI ¡Ý30 kg/m2) in the Dutch population, and to estimate the effect of a favorable change in BMI.
Methods. We used a multistate transition model (computer simulation model). The model contains data on demography, prevalence of overweight and obesity (by gender and 5-year age group), disease prevalence data, mortality data and relative risks of overweight/obesity on different diseases. The disease burden attributable to overweight/obesity was estimated in a scenario where overweight/obesity is assumed absent. Furthermore, the effect of a favorable change in BMI of 1 unit (1 kg/m2, equivalent to approximately 3 kilograms) was estimated. All results for incidence and mortality are cumulative over a period of 20 years. In addition the gain in life expectancy was calculated.
Results. Over a 20 year period, 13% of CVD incidence (about 520.000 cases), 8% of CVD mortality (about 75.000 cases), 48% of DM incidence (about 465.000 cases) and 25% of DM mortality (about 22.000 cases) was attributable to overweight/obesity. A decrease in BMI by 1 unit on the population level would reduce incidence of CVD by 4% (145.000 cases), CVD mortality by 2% (15.000 cases), incidence of DM by 14% (140.000 cases) and mortality of DM by 5% (4.500 cases). In the absence of overweight/obesity life-expectancy would increase by 0.8 years, while a decrease of BMI by 1 unit in the total population would increase life expectancy by 0.3 years.
Conclusion. The disease burden (CVD and DM) attributable to overweight and obesity is substantial, and expected to increase further based on the increasing prevalence of obesity. A modest reduction of BMI would lead to the prevention of substantial numbers of CVD and DM cases.

P19
Evaluating interventions along the course of disease: modeling diabetes and its macrovascular complications
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Diabetes Mellitus and its complications cause a high burden of disease. Many different options for primary prevention and the prevention of its complications exist. To support decision makers in prioritising between different interventions in health care, insight into their health effects and costs over time is important.
Objectives. To develop a model that enables to estimate the long-term effects of primary prevention as well as the prevention of complications in diabetes patients in terms of health effects and costs of care.
Methods. Based on the RIVM Chronic Disease Model, a multistate transition model was developed with states representing individuals' risk factor and disease status. The model describes the relations between diabetes, its risk factors and its macrovascular complications. Based on literature and experts opinions, realistic targets and costs of several preventive interventions (both primary and tertiary) were defined and the long term effects of these interventions were estimated with use of the model.
Results. A set of formal equations which defines the diabetes model and a health economics module were implemented in Mathematica, combined with estimates of input data. This results in a population model, linking risk factor prevalence in the population to incidence of diabetes, and linking risk factor prevalence in the diabetes population to incidence of complications. The first results of primary preventive strategies on overweight and smoking will be presented.
Conclusions. The Chronic Disease Model has the advantages of full inclusion of competing death risks in the model and generalizability to other chronic diseases. The model enables to estimate effects of interventions on prevalence of different risk factors for macrovascular complications and associated costs, both in the general population and in diabetes patients.

P20

Explaining the decline in coronary heart disease mortality in Finland between 1982 and 1997

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Coronary heart disease (CHD) mortality has been declining in Finland since the1960s. Risk factor changes explained almost all the decline during the 1970s. However, since the 1980s mortality has declined more than might be predicted by the risk factor declines alone. The objective of this study is to assess how much of the fall in CHD mortality can be attributed to treatments, and how much to risk factor reductions. Analyses are made with a previously validated cell-based IMPACT mortality model, which combines a) effectiveness of treatments and risk factor reductions, with b) data on treatments administered to patients, and c) trends in cardiovascular risk factors in the population. Cardiovascular risk factors were measured in independent random samples in 1982 and 1997 in three areas in Finland: North Karelia province, Kuopio province and Southwest Finland. The sample sizes for population aged 35 to 64 years were 8,501 in 1982 and 4,500 in 1997. Population aged 35 to 64 years in the study areas was 256013 in 1997. Data on treatment and mortality in cardiac patients were obtained from the National Causes of Death register, hospital discharge register, medical records, myocardial infarction registers and social insurance data. Main outcome measures were estimated and observed changes in CHD mortality. Between 1982 and 1997, CHD mortality rates fell by 63%, with 373 fewer CHD deaths than expected from baseline mortality rates in 1982. The IMPACT model explained 77%-95% of this fall. Improvements in CHD treatments explained approximately 24% of the mortality reduction [acute myocardial infarction 4%, secondary prevention 8%, heart failure 2%, and angina 10%], and risk factors explained some 53%-71% of the reduction [cholesterol 37%-5%, smoking 9%-11%, blood pressure 7%]. These findings highlight the value of a comprehensive strategy, which promotes primary prevention and actively supports secondary prevention programmes. It also emphasises the importance of maximising the population coverage of effective treatments.

P21

Estimation of the risk of coronary events in Finnish population

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Traditionally the risk of coronary events has been assessed using the Framingham risk score. Risk calculation functions assessed using different populations can easily either under or over estimate the real risk in other populations. The large FINRISK database on cardiovascular risk factors and the follow-up data on morbidity and mortality have now allowed us to estimate the risk score for Finnish population.
The FINRISK cardiovascular risk factor surveys were carried out in 1982, 1987 and 1992 in three areas of Finland among population aged 25-64 years. The number of men participating in the surveys was 9391. Of them, 540 had a coronary event during the 10-year follow-up period. The number of participants and coronary events among women were 10056 and 137, respectively. Mortality from coronary heart disease and nonfatal myocardial infarction (MI) were identified during 10-year follow-up from the National Causes-of-Death Register and the National Hospital Discharge Register. The FINRISK score was calculated using logistic regression model. Persons with former MI were excluded from the analyses.
The odds ratios of different risk factors predicting coronary events among men without former diagnosis of coronary disease were 2.005 for smoking (yes/no), 1.435 for cholesterol unit (mmol/l), 1.018 for systolic blood pressure unit (mmHg), 0.433 for HDL-cholesterol unit (mmol/l) and 2.244 for diabetes (yes/no). For women the respective odds ratios were 2.362, 1.280, 1.017, 0.209 and 2.889.
Risk for a major coronary event (fatal or non-fatal) among men was: Risk= 1/(1+EXP(11.974-0.0906*age-0.6956*smoking-0.3614*cholesterol-0.0177*systolic blood pressure+0.8374*HDL-cholesterol-0.8081*
diabetes-0.4317*family history of MI))*100
Among women the risk was: Risk= 1/(1+EXP(11.702-0.0967*age-0.8595*smoking-0.2466*kol-0.017*systolic blood pressure+1.5632*HDL-cholesterol-1.0609* diabetes-0.4073*family history))*100
The applications of this risk calculation function can be utilized as a practical tool in health education as well as in clinical practice to assess the coronary heart disease risk.

Prevention Programmes and Lifestyle Interventions

P22

Evaluation of long-term effect of preventive program “Healthy Heart”

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The aim of the study was evaluation of long-term effect of comprehensive, multifactor CVD preventive program in order to provide evidences for public health policy.
Methods. Study group: random sample (n=800) from the population of Pontonnaja village, Kolpino District, St.Petersburg age 20 and above (N=8360). 605 (75%) agreed to participate in the preventive program "Healthy heart" (1998-2000). The intervention was effective as judged by following health indicators: decrease of BP and cholesterol level; increase of physical activity, quality of life. In 2005 the original sampling frame was used to select 443 subjects aged 40 and above, that were not included in the first sample. They corresponded group that participated in preventive program by sex, age, and social-economical class. The life status of intervention group and control group was ascertained. Also status of persons in the group (n=280) refused to participate in intervention program was analyzed. This report concerns mortality (overall and CVD) in intervention and control groups. Data were analyzed by logistic regression.
Results. Overall mortality in the population was 20% (95% CI=24-16%) (males: 23% (95% CI=21-24%); females: 18% (95% CI=13-23%)). In the prevention group it was 16% (95% CI=12-19%) (males: 22% (95% CI=16-28%); females: 10.9% (95% CI=7-15%)). Among those refusing participate in the program it was 20% (95% CI=15-25%) (males: 18% (95% CI=12-24%); females: 20% (95% CI=14-27%)). In multivariable model among those who participated in the prevention program mortality was 1.5 times lower than in controls (OR=0.67, 95% CI: 0.46-0.99). Mortality was 2 times higher among men (OR=2.34, 95% CI: 1.64-3.24). It rose every year by 10% (OR=1.1, 95% CI: 1.08-1.11). The refusal to participate in the program does not influenced mortality risk (OR=1.05 comparing with uninvited, 95% CI: 0.67-1.59). During 7 year of follow-up intervention program prevented 19 deaths.
Conclusions. The implemented program demonstrated long-term effect of preventive measures especially among women.

P23

Effects on Lifestyles of a Rational Treatment of Hypertension Program

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Background and aim. A proper management of hypertension requires usually lifestyle changes whether or not the patient is treated with antihypertensive drugs. This study tried to evaluate the effects on lifestyles of an antihypertensive treatment program, which is accomplishable within the primary health care without increased monetary and personnel resources. Methods: The patients of this study were recruited from two similar sized primary health care units covering populations similar in age and socioeconomic structure in the city of Turku. These units were randomized to a control and a study unit. A total of 244 hypertensive men and women, 35-74 years of age, with a stable and uncomplicated hypertension, were recruited to the study. The inclusion criteria were a mean systolic blood pressure of 160 mmHg or more or a mean diastolic blood pressure of 100 mmHg or more during their last two visits in the primary health care unit, or a use of antihypertensive drugs. A total of 229 subjects met the study criteria and 220 subjects finished the 12-month study. At the start, educated nurses guided subjects of the study group (n=112) during two 30-minute individual sessions and in a group session to change their lifestyles according to national guidelines. The subjects self-evaluated their living habits by a questionnaire and self-monitored their blood pressures at 3-month intervals, and the responsible nurse evaluated their answers and BP levels during the patient visits. Blood pressure and weight were measured, diet was monitored by 7-day food records, leisure time physical activity was assessed by a questionnaire and fasting blood samples were taken at baseline and at the end of the 12-month study.
Results. The study group showed only slight improvements in the lifestyle parameters. The improvements were nonsignificant when compared with changes observed in the control group.
Conclusions. The effects on lifestyles of individual and group counseling are small when the usual monetary and personnel resources of the primary health care are used. Population-based strategies, and possibly dietary guidance given by a nutritionist, may be needed to change lifestyles of the hypertensive clients of the primary health care.

P24

Lifestyle intervention in high risk subjects results in sustained reduction in the incidence of type 2 diabetes — the follow-up results of the Finnish Diabetes Prevention Study

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Background and aim. Intensive lifestyle intervention has been shown to prevent the deterioration of impaired glucose tolerance to manifest type 2 diabetes. However, it remains unknown whether the lifestyle changes and their impact on diabetes risk persist after the intervention. The aim of the follow-up of the Finnish Diabetes Prevention Study is to assess the extent to which the originally achieved risk reduction

of 58% will last after discontinuing of active counselling for lifestyle intervention.
Methods. A total of 522 middle-aged (mean age 55 years), overweight (mean body mass index 31 kg/m2) subjects with impaired glucose tolerance and therefore at high risk for developing type 2 diabetes were randomised into either an individualised lifestyle intervention including dietary and exercise counselling or a standard care control group. The intervention phase was terminated after an average duration of 3.9 years. After that the study subjects continued to visit the clinics for the annual examinations, which included an oral glucose tolerance test.
Results. During the total follow-up of 6.2 years on average, the incidence rates for type 2 diabetes were 4.2 and 7.2 per 100 person-years in the intervention and control group, respectively (log-rank test $p<0.001$). The risk reduction was strongly related to the success in achieving the intervention goals of weight loss, reduced intake of total and saturated fat and increased intake of dietary fibre as well as increased physical activity.
Conclusion. Lifestyle intervention results in a long-term reduction in diabetes incidence in subjects at high risk for type 2 diabetes.

P25
From overweight to balance
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From overweight to balance is a three-year project started in 2004. Its aim is to develop permanent patterns and activities that help to support the prevention of overweight and weight control among working-age people. The target of a pilot project on municipal level, called Well-being in Kerava, is modelling the process of building a local network of actors, whose common target is to promote the health of citizens in Kerava. These pilots are started in maternity clinic where the aim is to develop a self questionnaire and a guide for nurses for handling eating habits in maternity consulting hours, family coaching -groups and mother-baby-groups. The project also develops peer tutored group activity by educating laymen to group leaders. Groups study together and members support each other in making changes in eating and physical activity habits. Peer groups and maternity clinics also create cooperation with local vocational education and educational and physical activity system in order to give people guidance in buying foodstuffs and cooking and in physical activity. Second part of the project starts cooperation with a service station chain's food services. We aim at offering a possibility of choosing a healthier meal during working hours for those working in transport. The third part of the project runs a nationwide information campaign with the theme "A Small Decision a Day". This campaign focuses on rousing and supporting people to make small changes with the help of internet and by producing expert articles and TV commercials. Key words of the message are well-being and possibility and freedom to choose a healthy and positive lifestyle. Our partners in this project are Finnish Diabetes Association, The Finnish Association for the Study of Obesity, National Health Institute, UKK Institute and in the information campaign Finnish Association for Healthy Lifestyles and Fit for Life program.

P26
Physical activity campaign "Revitalize Your Heart" as innovative and effective method to promote healthy life style in Europe
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The escalating pandemics of obesity and sedentary life style in most European countries call to action. Public health burden of inactivity is enormous both from medical and economic point of view. In most European countries prevalence of sedentary adult population varies between 40 – 70 %. Thus today one of the most important aims in public health is to elaborate and implement successful strategy to help people to be more active. Revitalize Your Heart (Postaw Serce na Nogi) is nationwide, large-scale, high visibility campaign, with use of TV, radio, newspapers and many information sites. Campaign proposes combined package of simple education message and clear and simple rules of participation in the contest with attractive prizes. The aim of this study is to present evaluation of the campaign effects in Poland. We use the following methods of analysis: monitoring of changes in people knowledge about recommended dose and benefits of exercise, visibility of the campaign, local partners involvement, monitoring of changes in exercise behavior. The data obtained strongly suggest that national physical activity campaign is effective in promoting education message and could influence exercise habits of the population. The campaign is attractive both for youngsters, middle-aged and older adults, involves media and mobilizes very well local partners and sponsors. Similar nationwide campaigns have been performed in Czech Republic (coordinator: Lumir Komarek) and in Romania (coordinator: Radu Negoescu). On the ground of experiences of three campaigns in Poland, two campaigns in Czech Republic and Romania we believe " Revitalize Your Heart " campaign is effective method to promote physical activity and healthy lifestyle in population scale.

P27

Tools and Resources for Integrated Chronic Disease Prevention

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This session will highlight and discuss some of the tools and resources available for programs to use in assessing their chronic disease prevention efforts and developing strategies to increase the impact that programs have collectively in preventing chronic diseases and the risk factors that contribute to them. The Comprehensive and Integrated Chronic Disease Prevention Action Planning Handbook [Handbook] was developed with this goal in mind. It is based upon in-depth case studies of chronic disease prevention programs, experience from targeted technical assistance, input from chronic disease prevention experts, and research of other existing materials. The concepts in the Handbook have been used by the Rhode Island Department of Health to identify priorities for integrating its internal programs. Another use of the Handbook was to provide the basis for developing an integrated chronic disease plan for the state of Arizona. In both cases, the initial move toward integration was met with resistance, but by following the steps outlined in the Handbook, this inertia was transformed into momentum for more collaborative efforts. Additional resources were identified while researching material for the Action Planning Handbook. Adapting the steps in the Handbook and the potential for applying several of these materials by session participants will be discussed.

P28

Disease prevention partnership across Finnish-Russian border – the Pitkäranta project

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In early 1990's, a collaborative project on chronic disease prevention was started in the Republic of Karelia, Russia, between the Karelian Health Ministry and the National Public Health Institute and the North Karelia project in Finland. Life expectancy in the Republic of Karelia was very low mainly due to cardiovascular diseases and accidents and violence. Pitkäranta district was chosen as a demonstration area to build up health research and activities to prevent chronic diseases utilizing the knowledge and experience gathered during the North Karelia project period in Finland. Collaboration includes education and consultation, research and health monitoring activities as well as intervention approaches. For example, Karelian Medical Conferences have been carried out almost yearly since 1993 to exchange experiences in health work between the health professionals and researches in Russia and in Finland. The Health Fairs, organized in Pitkäranta since 1998, have been an important venue to disseminate the recent knowledge and health messages to public. From the very beginning it was evident that reliable information on diseases and risk factors is needed for prevention planning. Health monitoring activities were started in 1992 and have been continued since regularly. Data has shown that the prevalence of smoking among men is very high. Elevated blood pressure levels are a remarkable problem both among men and women and over 30 % of women are obese (BMI >30 kg/m2). Also other epidemiological surveys have been carried out including youth surveys and asthma and allergy surveys. Based on the information received from health surveys and experience on preventive action in North Karelia several intervention activities have been launched in Pitkäranta. For example, international smoking cessation campaigns (Quit and Win) have been organized since 1994 with several other anti-smoking activities in schools, worksites and among population. During the years a multidisciplinary network of professionals and institutions have joined the collaboration.

P29

Evidence-based Disease Prevention: Regional Aspects of Health Manpower Training

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Background. The relevant problem in reformed epoch when disease prevention becomes priority direction is training of leading employees, whose activities aimed at health promotion and disease prevention. Development of prevention needs ability to distribute rationally and use effectively resource on basis of current evidence-based technology. Aim of the work is improvement and introduction of educational programs of evidence-based disease prevention for different experts and persons, who are taking decision in prevention work.
Methods. The course of evidence-based disease prevention was developed in 2000 under hands on State Research Institute of Preventive Medicine (Moscow, Russia), CDC (Atlanta, USA), Ural State Medical Academy of Postgraduate Education (USMAPE) (Chelyabinsk, Russia), and Chelyabinsk State Medical Academy (Chelyabinsk, Russia). This course was approved for 15 public health directors in Chelyabinsk in 2001. After that conceptual part of the course was reviewed by Russian CINDI specialists who recommended using the course in Russian regions after revision.
Results. The 36-hours course of evidence-based disease prevention was introduced into educational programs of advanced thematic training courses of Ural State Medical Academy of Postgraduate Education in Chelyabinsk in 2001. Topics composed

of the course are epidemiology of noncommunicable diseases, situation analysis, Internet using, assessment of needs and requirements in prevention measures, organization of sociological studies, and technologies of prevention programs and their assessment. Students who study this course are primary care physicians, particular specialists, specialists of Prevention and State Hygiene Centers, psychologies, sociologists. During the year more than 400 specialists are studying on the advanced training courses. Data of population-based (behavioral risk factors study) and cohort (INTER-HEART Study, PREMISE Study) studies, conducted in Chelyabinsk Region are using in process of training. In 2003 there was formed a computer room on order to master given knowledge for all students in USMAPE. For popularization the course was accommodated to Internet (Supercourse) on Russian Language in 2003.
Conclusions. The course of current technology of evidence-based of noncommunicable disease prevention allows studying different specialists, persons, who are taking decision for rational and effective use of capability of prevention program realization.

P30
Weight loss control programe in prevention of noncommunicable diseases
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Background and aim. Obesity as a chronic noncommunicable disease with increasing prevalence and being a risk factor for a number of other diseases, presents a serious health problem. Data from a number of studies have shown that even a modest weight loss improves glycemic control, reduces blood pressure, as well as cholesterol and triglycerides levels. The purpose of this study was: to investigate the prevalence of some risk factors for noncommunicable diseases in obese adults and to point to weight control loss programs as the most optimal population strategies for preventive noncommunicable disease associated with obesity.
Methods. Obese and overweight non-diabetic adults (body mass index over 25kg/m2), n= 1505, aged from 18–65 year were randomized from the patients who were included in weight control loss program of Dietetic Centre in Public Health Center, Nis during five years. During their first visit, the patients it were analyzed for total blood cholesterol, blood triglycerides and blood glucose levels using standard biochemical procedures. Blood pressure was measured at the start of the dietary treatment.
Results. The group of obese adults contained 2,3% subjects with abnormal glucose tolerance and 17,8% with high levels of glucose. High prevalence of hypercholesterolemia (50,4%), hypertriglyceridemia (28,8%) and arterial hypertension (57.8%) was found.
Conclusion. On the basis of the available literature and the results obtained by this study, the following conclusions are obvious: the implementation of weight loss control programs in Public health Institutes is most usefull for reduction of obesity and risk factors and comorbidities associated with it. Prevention of noncommunicable diseases, especially obesity, by promoting healthier lifestyles should be one of public health highest priorities. Greater attention should be paid to health education of patients, concerning proper nutrition habits.

P31
12 years of governmental subsidy of the health promotion projects in Czech Republic
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Quite a large percentage of population is in the risk of chronic non-communicable diseases due to the positive risk factors. Current community health conditions and known risk are the reasons to develop health promotion and disease prevention. The National Health Programme was accepted by government and is realised partly by The Health Promotion Projects since 1993. The projects are presented and realised by governmental as well as non-governmental organisations and private subjects including medical nad non-medical organisations, schools, municipalities etc. The aim of this analyse is to evaluate health promotion projects development since 1993. The experts in non-communicable diseases and health promotion were asked to evaluate the methods, effeciveness, quality of outputs, methods reproducibility and additional results by the standard procedure. 1170 projects were evaluated. The aim of evaluated community projects were knowledge improvement and behaviour changes of the target population, alimentary habits changes, physical activity attiude changes, smoking attitude changes, stress attitude change, global attitude change, introduction of the new preventive methods and training of professionals, education programmes and peer programmes and the like. In lots of projects the mass media campaigns were used. The individual intervention covered following areas: nutrition, smoking, physical activity, stress and global counselling of a healthy life style. 191 leaflfets, 166 booklets and 34 book were published as a part of the projects realisation, 44 videos, 11 computer games and 11 www pages were created as well. The analyses of health promotion projects shows their steadily increasing quality, reproducibility as well as quick response to the current needs of the public health.

P32
Prevention of cardiovascular diseases in primary care in Ukraine
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High prevalence of coronary heart disease and its risk factors among Ukrainian population indicates to an unfavourable epidemiological situation and points out the necessity of performing of wide range preventive actions in population. Objective of the investigation is to study the role of health professionals in preventive practice in primary care. The representative selection of 18-64 years old males (824) and females (911) was investigated using the standardized epidemiological methods. In primary care the increased level of blood pressure is discovered in 27.1% of persons, hypercholesterolemia - in 2.2%, overweight- in 15.8%. At the same time, according the data of epidemiological investigations the prevalence of arterial hypertension (> 140/90 mm Hg) is 35.3%, the frequency of hypercholesterolemia is 22.6%, overweight is determined in 56.8% of persons and smoking has been spreaded in 43.9% of men and 16.5% of women. Only one half (9.8%) of persons with increased level of blood pressure get the advises of health professionals about moderation of dietary sodium; only 10.8% of persons - about reduced fat intake; only 3.3% - about limitation of alcohol consumption. Only 9.8% of persons receive recommendations about weight reduction and only 14.4% - about smoking cessation. In 6.6% of cases medical specialists in primary care advice to rise the level of physical activity. The increasing of cardiovascular diseases prevention efficiency demands not only additional material. investments, but, first of all, change of attitude of health professionals to preventive measures and to health in general, more orientation to conduction of active preventive interventions, special training in preventive practice.

P33

A program for overweight children

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A program for overweight children (7-12 year old) was tested in eastern Finland in 2002-2005. The program included nutrition guidance for the children and their families. The guidance for the children was carried out in several, very practical ways. The parents met 8-10 times in group sessions with the dietician. The program also included weekly physical exercise for the children. They were familiarized with various kinds of physical exercises. They also attended a 5-day summer camp.Close to 150 children and their families took part in the program. Each family participated the program for about 1, 5 years. The results were promising: the average BMI of the pilot group decreased 12 % from + 55 % to + 43 %.The program was carried out by a public-health nurse, a dietician and a physiotherapist.

P34

Partnership: arising culture for sustainable development in health systems

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Over the last decade, numerous emergency situations have affected the health of populations worldwide. Despite the tragedy effects, these situations do represent an opportunity for longer term investments in healthcare. Emergency situations can rapidly mobilise resources, stimulate inputs from governments, international agencies, donors, focusing mainly on acute conditions like communicable diseases. However, chronic conditions, as NCD, should always be considered part of the short term and long term actions already during the emergency phase. Furthermore, partnership is a crucial tool rising from that period and becoming the axis of comprehensive development plans in order to introduce a cultural change. This document discusses the partnership value established during emergency and development experiences of the WHO country office in Albania, using mental health as an example of NCD. This process has provided the following advantages to the sustainable national healthcare development: 1) An organisational memory with long term experience and well developed relationships with the partners involved 2) Translation of the various WHO technical programs following Albania's specific context 3) A policy driven approach with ongoing 'live' development and elaboration of health strategy 4) Development of strategies relevant for the long term health conditions 5) Cost effective utilisation of resources available since the time of the emergency situation to contribute to longer term health care reform 6) The establishment of an effective structure and agenda for the co-ordination of resources and capacity building 7) Integration of healthcare development into the country reforms. The aim of this paper is to share these experiences widely, analyse some of the factors that have been critical to the success of the partnership established in Albania and to provide a resource for those engaged in providing country assistance. These experiences may be of use to those countries working towards accession to the European Union (EU).

Non-smoking Interventions and Strategies for Tobacco Control

P35

The Sudanese experience with Quit & Win campaigns

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Since the 1st introduction of the international Quit & Win programme in Sudan in the year 2002 by the Toombak & Smoking Research Center, there has been no form of public cessation programmes in Sudan. The programme aimed to recruit the largest number of smokers to quit, increase the awareness about hazards of tobacco use and increase the collaboration between international organizations and local NGOs. The Quit & Win programme was organized two times in Sudan in the year 2002 and 2004. The following methods were used: Widely distributed registration centers all over the Sudan. Public education programs. Media played a vital role in increasing awareness about tobacco hazards. Quit line. The Quit & Win programmes were highly successful and each recruited thousands of participants. National prizes were given to the winners. Sudan won the 2004 regional super prize. The programme initiated collaboration between local tobacco control workers (Governmental and Non- governmental), all of which participated in. It also strengthened the collaboration between them and international organizations. The programme also resulted in increasing the awareness about the importance of tobacco control, and about tobacco hazards. In conclusion, the Quit & Win programme was very successful in Sudan. In fact this cessation programme is very cost effective for implementation in developing countries with limited resources.

P36

Effectiveness of smoking cessation groups in Slovenia

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Background and aim. According to the national programme on prevention of cardiovascular diseases in primary health care, the workshops for smoking cessation groups have been organized in Slovenia since 2002. The aim of the workshops is reducing the number of smokers. Their effectiveness has been monitored since 2002 as well. The results of period 2002-2003 are reported.
Methods. The workshops were performed by 75 experts especially trained to qualify as group leaders (the majority of them were medical nurses). No participation fee was charged to smokers who expressed their wish to quit smoking, since the financial support of workshops was provided by The Health Insurance Institute of Slovenia. Every workshop was composed of six 1-hour sessions in a period of two months. Each of them consisted of a different topic like ways of reducing the number of smoked cigarettes, preparations to quit smoking, dealing with body and mind addiction, dealing with stress and maintenance or quitting. At the first session the participants filled in a questionnaire about their smoking status. The same questionnaire was used for the evaluation of effectiveness of quitting smoking at the end of the workshop, and after six and twelve months.
Results. There were 392 attendants at workshops in 2002 (46.9% males, 53.1% females), and 553 at workshops in 2003 (49.5% males, 50.5% females). At the end of the workshops 2002 there were 202 (51.5%), after six months 133 (33.9%), and after twelve months 113 (28.8%) non-smokers. At the end of the workshops 2003 there were 216 (39.1%), after six months 171 (30.9%), and after twelve months 155 (28.0%) non-smokers.
Conclusion. We assess our workshops as effective and as part of a successful national health promotion programme, performed by health experts. It has successfully changed the approach of solving the smoking cessation problem in Slovenia.

P37

Evaluation of the Philippine's tobacco control program through changes in prevalence of tobacco use

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Objective. Evaluate the impact of the Tobacco Control Program in the Philippines through changes in prevalence of tobacco use after five and ten years of implementation.
Methods. A cross-sectional prevalence survey was done with a sample of 10,240 Filipinos aged 15 years and over selected by multi-stage stratified cluster sampling covering all 16 health regions of the country. Prevalence of current tobacco use was compared to the findings of similar studies conducted ten years and five years earlier, the start and middle years of the tobacco control program implementation.
Results. Prevalence of current tobacco use is 23.5%, which is significantly lesser than 46.5% baseline rate from the 1989 Lung Center of the Philippines Study, and 33.0% rate in the 1998 Clinical Phase Study of the Food and Nutrition Research Institute. Current tobacco use in males is consistently higher than in females in the three studies. However, rate in women is increasing. The prevalence of current tobacco use in young adults aged 20-29 years old is at 23%, significantly lesser than reported 38.6% rate of the 1998 Clinical Phase Study. Over half (65%) of current smokers admitted to have started smoking at age 19 years old and below in the 2001 report.
Conclusion. The program is relatively successful in decreasing current tobacco use prevalence. As there were enormous resources invested for health promotion and education activities, greater credit go to the private sectors' involvement and advocacy. Reflections: Over half admitted to have had started tobacco use early in life. From the Philippine GYTS, the prevalence of tobacco use in youth is high which may eventually overtake significant gains. Hence, sustained and concerted efforts of Philippine policy makers, legislators and advocates to prevent initiation of tobacco use especially in youth.

P38

The "Quit and Win" Program for smoking cessation in Italy

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The Quit and Win Campaign is at its fourth edition in Italy and at its sixth edition in Finland. It spread from one region (Veneto, Italian Coordinating Centre) to 11 regions at its latest edition.The initiative was carried out thanks to an integrated collaboration and partnership among the participant regions and the different community services. The involvement of local press and media was aimed at amplifying the initiative. A hard and fruitful work was done to inform general practitioners, chemists and other health care personnel to promote the initiative by spreading brochures. Efforts were carried out to find sponsors in order to raise funds for prices.The results coming from all the Italian editions enlightened an increase in the number of participants, raising from 2462 participants in 1998 (first Italian edition) to 8186 in year 2004 (latest edition). This one showed a participation of 4812 males (M) and 3373 females (F); the most represented age class was 25-34 years, accounting for 35.5% M and 32.6% F; 43.1% M and 40.1% F had been smoking for 20 years or more. Strong smokers (≥ 40 cigarettes/day) were represented by 4.3% of M and 1.2% F. Among all subjects, 47.2% tried to quit smoking almost once or twice in their past. Among those who quitted smoking for four weeks, 36.7% stayed non-smokers at one year's follow-up (2004 edition). Smokers received information about the Campaign mainly from health care personnel (46.3%) in the first edition, while in the latest the most important way of information was the web-site (31.7%). Most quitters didn't use any support to replace nicotine effects (79.7%) and half of them didn't receive any support from surrounding people (55.2%).

P39

Estonian health promoting hospitals against tobacco

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Backround and aim. The National Strategy for Cardiovascular Disease (CVD) Prevention for 2005-2020 is implemented in Estonia. Characteristic feature of Estonia is a stable high level of early CVD incidence, loss of work capacity and mortality in the middle-age group. Out of 100 000 people at least 250 men and 80 women under the age of 65 die of heart diseases per year. 44% of men and 18% of women are daily smokers. 2000 deaths and 3500 new diseases per year are caused by smoking in Estonia.
Methods and results. The priority for the year 2005 is to reduce smoking prevalence with the help of a new Tobacco Law. The tasks of the Estonian Network of HPH in this area for 2005 year include: 1) To join the European Network for Smoke-free Hospitals (ENSH) and develop relevant cooperation with other hospitals in WHO HPH and ENSH networks. 2) To open more smoking cessation counselling clinics and to train smoking cessation counsellors in health promoting hospitals. Now we have already 18 counselling clinics (in 16 hospitals and in 14 counties) and 55 educated counsellors. In the beginning of 2006 there should be smoking cessation counselling service in all 15 counties. 3) To pay more attention to tobacco-related problems and highlight the role of health professionals in tobacco control. 4) To launch smoke-free hospitals movement in 5 hospitals of Estonian HPH Network. 5) To develop cooperation with local community institutions by organizing World No Tobacco Day – 31 May or World Heart Day etc.Effectiveness indicators: By 2020 the CVD mortality of men and women under 65 should be reduced by 40 and 30 percent respectively. The smoking habit is diminishing among the 16-64 years' old men to 40% by 2008 and to 30% by 2020. The smoking habit is diminishing among the 16-64 years' old women to 16% by 2008 and to 10% by 2020.
Conclusion. The national CVD prevention strategy in Estonia has been developed for 15 years. The efficient implementation of the strategy requires working as a united front at all levels. It is the only way the expected results for 2005-2020 can be achieved.

Food Habits and Nutrition

P40

Mapping berry, fruit and vegetable consumption in Finland

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Consumption of fruit and berries has more than doubled and of vegetables more than tripled during the last three decades in Finland. In this study the geographical and gender differences in consumption of berries, other fruit and vegetables today in Finland were visualized as food consumption maps. Data were collected in the Health 2000 Survey carried out in Finland in 2000-2001. A nationally representative sample, 9922 adult men and women (18+ yrs), was based on the Population Register. Food consumption over the preceding 12 months was assessed by a validated food frequency questionnaire (FFQ, 128 food items with portion sizes), given out at the health

examination, filled in at home and sent back to the study center. The final data included 6787 accepted FFQs (89%). Consumption of berries, other fruit and vegetables were estimated using a bayesian conditional autoregressive model. The model describes the spatial variation as a network of neighboring grid cells connected with each other through an autoregressive process. Coordinates of the respondents were obtained from the Population Register and located into a 10 km by 10 km grid covering the country. The model included effects on consumption of age, sex, their interaction, population density and study year. Consumption of berries is popular in the more rural Northeastern Finland, while consumption of other fruit and vegetables is higher in the Southern and Southwestern Finland. Compared to the nutrition recommendations (WHO, 2003), there still is a clear need to promote consumption of berries, other fruit and vegetables in this country.
References: WHO. Diet, Nutrition and the Prevention of Chronic Diseases. Report of a Joint WHO/FAO Expert Consultation. WHO Technical Report Series 916, Geneva. 2003.

P41
Decreasing trends in sodium intake in Finland
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High sodium (salt) intake increases the risk of chronic diseases, e.g., cardiovascular diseases. Decrease in salt intake has been one aim in the prevention of chronic diseases in Finland since the late 1970s. The main objectives of this study were to present the trends in urinary sodium excretion and estimated sodium intake during the past about 25 years. A twenty-four hour urinary collection was carried out in a sub-sample in connection with the Finnish population risk factor surveys in 1979, 1982, 1987, and 2002 (n=4648, 25-64 yrs of age). Urinary sodium and potassium concentrations were analysed in the same laboratory using a flame photometer until 1987 and an ion-selective electrode in 2002. Sodium intakes were estimated on the basis of a three-day food record in 1992, a 24-h recall in 1997 and a 48-h recall in 2002 in a sub-sample in connection with the risk factor surveys (n=6730, 25-64 yrs of age). In addition, salt intake between 1980-1999 was estimated based on Food Balance Sheets data. The sodium content of foods and recipes has regularly been updated in the National food database since early 1980's.
In 2002 the mean 24-hour sodium excretion was 3.7 g (9.4 g salt) in men and 2.9 g (7.3 g salt) in women ($p<0.0001$). Between 1979 and 2002 the urinary sodium excretion decreased by more than 20%. The estimated mean daily sodium intake in 2002 was 3.9 g (9.7 g salt) in men and 2.7 g (6.7 salt) in women ($p<0.0001$), showing a decrease of about 16% in one decade. The total estimated daily per capita intake of salt showed a decrease of about 13% from 1980 to 1999.
Sodium intake in Finland has decreased significantly during the past about 25 years. The levels are still considerably higher than recommended.

P42
Dietary composition and development of type 2 diabetes in high-risk subjects - the Finnish Diabetes Prevention Study (DPS)
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Background and aim. Several dietary factors are associated with type 2 diabetes risk, but data on high-risk subjects who constitute the target of the potential preventive intervention are scarce. The aim of this study was to assess the effect of dietary macronutrient composition on type 2 diabetes incidence during an intervention trial aiming at diabetes prevention by lifestyle modification.
Methods. Altogether 522 over-weight, middle-aged men and women with impaired glucose tolerance were randomised either to get ‘usual care’ (control) or intensive lifestyle counselling to reduce weight, to increase physical activity and intake of dietary fibre, and to decrease intake of dietary fat and saturated fat. For this analysis the treatment groups were combined. Mean intakes of fibre (g/1000 kcal), total fat (E%), and saturated fat (E%) during the intervention were calculated from annual 3-day food records. Diabetes status was assessed annually by repeated 75-g oral glucose tolerance test. The Cox model was used to analyse the relationship between quartile of fibre, fat and saturated fat intake and risk of getting diabetes during the mean follow-up of 3.9 years. Models were adjusted for sex, treatment group, baseline 2-h plasma glucose and nutrient intake, baseline weight and weight change and physical activity.
Results. Adjusted hazard ratios (highest compared with lowest quartile) were 0.38 (95% CI 0.19-0.77) for fibre intake, 2.14 (95% CI 1.16-3.92) for fat intake, and 1.73 (95% CI 0.89-3.38) for saturated fat intake. Compared with the low-fat/high-fibre category (cut-of points based on median intake), hazard ratios were 1.98 (95% CI 0.98-4.02), 2.68 (95% CI 1.40-5.10), and 1.89 (95% CI 1.09-3.30) for low-fat/low-fibre, high-fat/high-fibre, and high-fat/low-fibre, respectively.
Conclusion. Dietary fat and fibre intake are significant predictors of progression to type 2 diabetes in high-risk subjects even after adjustment for other risk factors.

P43

Changes in diet and coronary heart disease mortality in Central Europe – case of Poland

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Coronary heart diseases are one of the main contributors to premature mortality in central Europe. In Poland in the period of 1960-1990 a dramatic increase in premature mortality among young and middle-aged adults (especially men) was observed. Unexpectedly at the very beginning of the political and economical transformation it has come to the trend inversion and dramatic decline in Coronary Heart Disease morbidity and mortality. Coronary Heart Disease mortality since the beginning of the 90s demonstrates permanent dramatic decline. It refers to both sexes and all age groups, in the youngest age group (20-44) among males and females the decline averages 10% annually (males-9,6%, females—10,4%), in the age group 45-64 about 6-7% (males - 6%), females – 7,6%), and in the age group 65 + about 7% (males – 6,4%, females – 7,6%). There is a hypothesis that this dramatic decline is connected with changes, which took place in diet of Polish population. The most important changes in diet concern the change of fat consumption structure. Vegetable fats and oils consumption has increased few times with considerable decline of animal fats consumption, mainly butter. The experience of Poland, similar to some other Central European countries, is consistent with other epidemiological and clinical evidence indicating that Coronary Heart Disease mortality rates can be dramatically and rapidly reduced by partially replacing dietary saturated fat with polyunsaturated fat intake while maintaining low trans fatty acid intake. Additionally increase in fruit and vegetable consumption and decline in smoking prevalence (in male population) can play a role in CHD decline in Central Europe. This presentation will discuss hypothetical factors which have affected the decline in premature mortality due to Coronary Heart Diseases in Poland.

P44

Risk assessment of foods fortified with vitamin D and calcium in Finland

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Vitamin D intake from natural sources is low in Finland. As a result, almost all milk and margarine are fortified with vitamin D. In addition, some mineral waters are fortified and fortification of fruit juices has been proposed. On the other hand, the range of the safe vitamin D intake is narrow (5-50 Î¼g/day). Fortification with calcium is also quite common (especially fruit juices), although the mean intake of calcium is quite high in Finland (1187 mg/day in men, 970 mg/day in women). The risk of toxic intake levels of vitamin D and calcium are therefore possible, especially because it is known that those who consume fortified products use also more often dietary supplements than others. Our aim was to assess the proportion of adult population with too low or too high intakes of vitamin D or calcium. We used data collected in FINDIET Study in 2002 among 2007 men and women, aged 25-64 years. Their food consumption was assessed using 48-h recall. Supplement use was collected by a questionnaire. We also used data on use of fortified products collected for the Finnish Food Administration. Simple what if - calculations showed that when only margarine was fortified (7.5 µg/100g) the proportion of those with low vitamin intake (<5 µg/day) was 42% in men and 60% in women. None of the men or women had vitamin D intake above 50 µg/day. If all types of milk (0.5 µg/100 g), margarines (7.5-10.0 µg/100g), mineral waters (0.1 µg/100 ml), and fruit juices (0.5 µg/100 ml) were fortified, the proportion of those with low intake would decrease to 19% in men and to 40% in women. None of the men or women would have vitamin D intake above 50 µg/day. Monte Carlo simulations also showed that vitamin D fortification did not confer any risk of vitamin D overdose. These analyses will be done also for calcium.

P45

The relationship between university students and their mothers weight loss practices

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The aim of the cross sectional survey is to investigate the link between weight loss practices of Turkish university students and their mothers. 432 university students and 347 mothers were participated in the study. The Statistical Package for the Social Science (SPSS, version 12.0) was used in analyzing data. Cronbach' alpha values were determined to asses the inter-item reliability of the final scores. Descriptive statistics were calculated for demographic characteristics of students and mothers. Pearson's correlations coefficients were used to asses the correlation between variables. Chi-square analyses were performed to determine if students' weight loss practices were dependent on mothers'. T-tests were run to determine if there was a significant difference in BMI (Body Mass Index) between students and mothers. T-tests were also conducted to determine the relationship between mothers' education level and BMI of students. A positive relationship between parental controls of weight loss practices in university students was found in this research.

P46

Adult Food Habits and Nutrition of Urban Population in Georgia

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Background and aim. In order to assess disease related behavior (DRB) and food habitis as its constituent in urban population of Georgia CINDI Health Monitoring survey were conducted in Chugureti District of Tbilisi, Georgia in 2004. Methods and questionnaire recommended by KTL were used for survey conduction. Data were collected through the face to face interviews. 3086 respondents at 25-64 years age were questioned in total. Simple random sampling was employed for selection. 2837 responders have answered all obligatory questions.
Results. 29,7% of responders never prepare food at home. Only 25.4% prepare food at home every day. Majority prefered to use vegetable oil for food preparation and only 8.2% use butter for this. 73.4% of respodents use butter, butter products and other kinds of enimal fats with bread. 57% usually consumps high fat milk and dairy products. Respondents use 2,74 teaspoonfuls of sugar with coffe or tea on average. They consume on average 4,4 slices of white bread a day. During the week responders mostly eat cheese – 4,4 times; chicken – 1,6 times; beef – 2,3 times; other meat products – 2.2 times; eggs – 2,4 times a week. Consumption of fresh vegetables was 3.3 times on average; cooked vegetables – 2.1 times; fruits – 3.8 times; fried or boiled potatoes – 3,6 times. sweets – 2.3 times a week. 57.8% add salt to their meals when the food is not salty enough, and 11.6% - almost always. Majority (more than half of respondents) said that nobody gives them advice to change their dietary habits and in 33% they get such advice from family members.
Conclusion. The results has shown high consumption of fats and products containing fats and related rather low of vegetable products and fruit in a urban population of Georgia, that is the constituent of unhealthy nutrition and DRB, concerning to non-coommunicable diseases.

P47

Habits in anaemic school-children nutrition in Serbia

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Background and aim. Anaemia is ignored in Serbia even though it is one of the most prevalent public health problems. Prevalences among various subgroups are estimated at:26,7% for adults, 30% for pregnant women, 37,2% for lactating women, 36,5% for older than 75, 17,8% for 7-to 14-year old children. The aim of this paper is studying regularities in meal consuming and frequency of taking some vegetable and animal provisions which are of importance for occurrence and deterioration anaemia within 7-to 14-year old children in Serbia.
Methods. Within the first population study of the health condition and behaviours of the inhabitants of Serbia which is done by a pattern of the cross sectional study on a representative household sample in the year 2000, on 527 examinees 7-to 14-year old children, by cyanmethemoglobin method in full blood hemoglobin value was determined. Examinees data are gotten through specially designed questionnaires as research instruments. Within the help of Uni- and Multivariant Regression Analysis predictors of anaemia within our 7-to 14-year old children are identified.
Results. All meals have 20,6% examinees every day. Anaemia is the rarest at daily consummation of all meals (p>0,05;14,8% anaemic). Anaemia is common within the population which is having lunch never (p0,05; 22,4% anaemic), milk and dairy products (p0,05; 24,6% of the diseased).

P48

Meal frequency and portion size as risk factors for obesity

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Obesity poses a serious health risk in many country. Therefore, study of risk factors for development of obesity is necessary for timely prevention. The primary purpose of the present study was to investigate factors associated with overweight - eating frequency and portion sizes among adults, in order to determine the most optimal population strategies for preventive activities in Serbia. A cross-sectional study on randomly chosen 144 males and 180 females between 20-58 years old was performed in Niš. Body weight (kg) and height (m) were assessed by standard methods and body mass index (kg/m2) was calculated. The data concerning the meal frequency and portion sizes have been obtained by original structured questionnaire. For large independent samples, the existence of statistically significant difference between average number of daily meals, weight of daily meals and body mass index was examined by means of T-test. There was statistical difference between the average number of daily meals among subjects with body mass index < 25 kg/m2 and overweight or obese subjects (T=2,55; P<0.05). Moreover, there was also statistical difference between portion sizes, among obese people and control group (T= 2,63; p< 0,05). We concluded that increasing eating frequency and smalling portion size is important for decresing risk development of obesity. Therefore, advice on feeding frequency could play an important role in public health policies for reducing levels of overweight and

obesity among adults. Portion size ought to take place in dietary guidelines and public campaigns.

P49
Similar gender differences in the use of meat, fruit and vegetables in Finland and the Baltic countries
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Background and aim. The purpose of this paper was to explore whether the use of foods generally classified as masculine or feminine – meat, fruit and vegetables – follow a similar gender pattern in Finland and the Baltic countries.
Methods. The Finbalt questionnaire data are based on random samples of adult population in Finland, Estonia, Latvia and Lithuania. The data offer a possibility to address gender differences at the turn of the century in the countries of different cultures and social conditions.
Results: Men were more often daily users of meat while the women used more often fruit and vegetables. The differences did not change after adjusting for the other socio-demographic variables. High educational level was associated with frequent use of fruit and vegetables. Educational differences in the use of meat were few and inconsistent. The use of fruit and vegetables was more common in urban areas except in Finland where fruit use did not vary by place of residence. Gender differences were basically similar in all age and educational groups and in rural and urban areas.
Conclusion. The consistent association of gender with the use of the studied foods and the similarity of gender patterning in subgroups of the populations point to the stability of masculine vs. feminine food habits. Our results do not support the idea of stronger masculine and feminine gender identities in the transition societies.

P50
Consumption of fruits and vegetables in new EU member states
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The aim of the study was to analyze the level of fruit and vegetables consumption in ten European countries which joined the EU in 2004. The research was based on FAO food balance sheet data, available in 2005. According to the collected data the average level of fruit consumption in EU-10 in 2002 was 82 kg/person/year which constituted only 70% of the average EU-15 level. The consumption of vegetables was also lower in the new member states compared to EU-15, on average by 20%. In 2002 the total consumption of fruit & vegs in EU-10 was barely 179 kg compared to 238 kg in other countries. In the enlarged European Union the statistical level of fruit consumption was calculated at 104 kg, that is 15 kg lower than in the "old" UE-15. Among the countries with the lowest consumption of fruits in the region – the situation in Poland (49 kg/person/year) and Lithuania (62 kg) is worst. Despite big yearly fluctuations, the consumption however showed an increasing trend in the last decade. In the case of vegetable consumption the Czech Republic is characterized by the lowest level (67 kg) while in Slovakia the total f&veg consumption reached barely 50% of the EU-15 average. Among the studied countries only in Cyprus, Slovenia and Malta, located in the Mediterranean area, the total consumption of the analyzed products surpassed 200 kg in 2002. Low level of fruits and vegetables in daily diets are one of the main risk factors for the development of noncommunicable diseases. In Central and Eastern European countries the consumption of these products is traditionally very low. Implementation of country-wide 5-a-day programs and harmonization of legal regulations in these countries can be seen as a chance to increase the level of consumption under the condition that these mechanisms are implemented.

Epidemiology of Smoking and Nicotine Dependency

P51
Measuring the burden of selected diseases due to smoking in Serbia
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The prevalence of current smokers in Serbia, 47.5% for men and 33.1% for women, is one of the highest in Europe.
Objective. The objective of this study was to assess the burden of selected diseases due to smoking in Serbia.
Method. YLL (Years of Life Lost), YLD (Years Lived with Disability) and DALY (Disability Adjusted Life Years) due to smoking were calculated based on assumptions and methods developed by the Global Burden of Disease Study Group. We used the age-adjusted relative risks estimated for persons 35 years and over from the American Cancer Society Cancer Prevention Study, phase II (CPS-II) and data on prevalence of current smokers from the Serbian Population Health Survey, in the traditional

attributable fraction method. The burden of premature death due to smoking was estimated by multiplying the population attributable risk by the YLL of smoking-related diseases. The calculations were made for Serbia (without Kosovo and Metohia) for 2000 year. The study was conducted in 2003 year.
Results. Smoking was the risk factor associated with the greatest health problems in Serbia in 2000 year. It was responsible for 13.7 per cent of the total YLLs, 18.0 per cent in males and 7.9 per cent in females. Most of the tobacco burden was due to mortality from the selected conditions, especially from lung cancer, ishaemic heart disease, stroke and COPD. The greatest proportion of tobacco burden was associated with lung cancer: more than 80% of total DALYs. Standardized DALY rates due to smoking per 1000 population were 35.2 for males and 12.4 for females.
Conclusion. The study confirms that smoking places a substantial burden on Serbian society. In light of this, our study provides evidence for a strong need to develop a national policy to effectively control tobacco consumption in Serbia.

P52
Education of smoking-prevention at the Medical Faculty of Semmelweis University
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We carried out a survey among students of medical Faculty of Semmelweis University at the end of the preclinical and the clinical parts about their knowledge on harmful effects of smoking and about their preventive skills. This questionnaire has a few common questions with the Global Health Professionals Survey. Response rate was 63%, 36, 7% male and 62, and 7% female. Daily smoker is 14, 5% of male and 9, 3% of female. Our results: • At the end of the preclinical study 42, 2 % (CI 37, 2-47, 3) of students strongly agreed with the next statement: "Tobacco use is one of the most serious public health problems in the word." After the clinical studies the same data is 49% (CI 45, 0-52, 9). • Only 39% (34, 1-44, 1) of students after preclinical courses marked with the maximum point (on a 10 grade scale) the harmful effect of active smoking 48, 5 (CI44, 6-52, 5) after the clinical years. • In case of passive smoking only 17,5% (CI 13,9-21,8) of students after preclinical courses marked with the maximum score the harmful effect of second-hand smoking, and 35,1% (CI 31,4-39,0) among students after clinical courses. • By this survey medical students give cessation advice rather to the smoking patients with smoking related diseases then to the patients without these symptoms. The odds ratio is 6, 36 (CI 4, 6 – OR – 8, 8). • We asked their opinion about education of practical skills of smoking cessation. Only 14, 2% (CI 12, 1-16, 5) of the students was satisfied with the presentation of this topic. Regarding these results we must advice to modify the university curriculum.

P53
Women, tobacco use and chronic diseases
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Establish behavioural risk factor levels particularly tobacco and alcohol use among Filipino women aged 15 years old and over. Cross-sectional prevalence study among Filipino women aged 15 years old and over done in 2001. A three-stage stratified, cluster sampling design was utilized, all 16 health regions represented. A structured questionnaire modified from CDC's BRFSS was used for household face-to-face interview with a total of 3,738 women respondents. The prevalence of current tobacco use in the Philippines is 23.5%. About 8% of these smokers are women. Among them, 65.2% were ever smokers and 50.6% are current smokers. Less than 10% had initiated smoking at ages 6-9 years, 14.3% at ages 10-15, 57% at ages 20-24, 19.8% at ages 25-30, and 5.3% at ages 30 and over. Socializing and for relieving stress (80%) are main reasons for smoking. Cigarette is the major (33%) type of tobacco product being smoked. Over 95% perceived tobacco use causes chronic disabling diseases. Only a quarter agree that tobacco products should be advertised. Majority (80-95%) favor ban of tobacco use in public places. Although over half of these women had admitted to have good perception of their health status, about 13.2% of women has hypertension, 1.6% had Myocardial Infarction, 1.8% has Angina or Coronary Artery Disease, 2.0% had stroke, and 2.0 has diabetes. Tobacco use among women in the country is moderately high. Majority had initiated tobacco use at very young age. Tobacco use is a risk factor for chronic disabling condition. A number of Filipino women are suffering from cardiovascular disease, stroke and diabetes. Health promotion and education of Filipinos should be intensified in schools and in the communities as more women are taking up the habit which is detrimental to their health and well being. Total ban on tobacco advertisement and regulation of sale and distribution of these products should be enforced. Behavioural risk factor surveillance should be sustained to provide evidence.

P54
The nicotine dependence syndrome scale in Finnish adult smokers
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The Nicotine Dependence Syndrome Scale (NDSS) (Shiffman et al. 2004) is a new multidimensional measure of nicotine dependence. The aim of this study was to examine how NDSS scores correlate with nicotine dependence defined by the Fagerström test for nicotine dependence (FTND) and Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria among Finnish smokers participating in an ongoing family study of cigarette smoking. The NDSS scale doesn't assess the number of smoked cigarettes as is included in FTND and DSM-IV. Twin pairs concordant for smoking were identified in the Finnish Twin Cohort Study. Siblings and parents of the adult twins were also interviewed by telephone using a structured interview assessing smoking habits and nicotine dependence based on FTND-related criteria and DSM-IV criteria. Subjects filled out a questionnaire with the NDSS scale (31 items) soon after the interview. In this ongoing study we carried out analyses of 1370 smokers. The NDSS-T score (a summary measure of dependence) was normally distributed with overall mean of -0.85, SD1.19, and correlated highly (r=0.64) with the FTND score and with DSM-IV symptom score (r=0.51). The corresponding correlation with FTQ (i.e. earlier version of FTND) in Shiffman's (2004) study was 0.54. In factor analysis we derived three factors, named drive/priority, stereotypy/continuity and tolerance. The first factor, drive/priority, correlated with FTND (r=0.54) and DSM-IV (r=0.49), the others correlated less than the first factor. Factor structure appeared to be quite similar in Finnish and US data. The NDSS T-score test-retest correlation of 125 subjects was 0.76. The NDSS-T score is highly associated with FTND and DSM-IV defined nicotine dependence. These analyses indicate that the NDSS functions similarly in Finnish and US smokers. This fourteen item scale is a usable instrument and worth considering in clinical work.

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P55

Prevalence of smoking among population of Chelyabinsk Region

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Background. Smoking is the widespread risk factor of noncommunicable diseases and the main cause of death in the world that could be prevented. In Russia prevalence of smoking is 60% in men and 15% in women. The aim of the study is to assess prevalence of tobacco smoking among population in Chelyabinsk Region.

Methods. Data came from a population-based cross-sectional study based on a representative sample from population of Chelyabinsk Region (3.6 million) aged 18-64 years (4000 persons) schoolchildren (656), and students from the sociological survey "Youth and Healthy Life Style" (2450). Smoking habits were assessed using a standardized questionnaire and criteria recommended the CINDI Program.

Results. 67% of respondents are current smokers. Smoked men constitute 82%, and women - 37%. The highest smoking prevalence was found in age group 18-24 years. The mean number of smoked cigarettes per day is increasing, approximately, in 2 times with aging in women and 1.5 times in men, excepting the age group 55-64 years old of both sexes. Men, on average, smoked in 4 times cigarettes more (9.2) per day, than women (2.5, $p<0.05$). About 40% of population aged 18-64 years are exposed to passive smoking at home and at work. Among students of colleges and universities prevalence of smoking is 65%, and 65% of them knows about harmful effect on their health. The most popular reasons for continuation of smoking are smoking makes easy relations" (34% of students) and allows feeling free and confidence" (18%).

Among schoolchildren 26% of students were found as current smokers, 36% were occasional and to have tried smoking. 74% of smokers would like to give up smoking however only 56% of them know how to do it.

Conclusion. Our results demonstrate high prevalence of active and passive tobacco smoking among population of Chelyabinsk Region, especially among youth. However, young smokers are the least habitual to smoking. It creates prerequisites for application of effective smoking preventive measures among this population group including "Quit and Win" company.

P56

Smoking behaviours and knowledge about health effects of smoking employees in two public institutions

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Background and aim. Smoking is a common habit and an important problem in Turkey. According to a national study in 1988, 43.6% of the population is current smoker. Although there are a lot of studies in different occupational groups, studies covering the people working in public institutions are limited. Furthermore, constitution of smoke free work places is one of the important components of the Framework Convention on Tobacco Control Program. In this study it is aimed to determine some characteristics related to smoking habits of the people working in two public institutions in Ankara.

Methods. A self- administrated questionnaire was conducted to collect data. SPSS 10.0 statistical program was used in data analysis and to evaluate the difference between groups, Chi square test is used.

Results. 724 employees participated to the study. The mean age of the participants is 40.4 (min:17, max: 77). Of the participants 55.2% are male, 76.6% are married and 57.6% are graduated from university. 34.0% of the participants are never smoked, 16.1% are ex-smokers

and 49.9% are current smokers. Peer effect (36.0%), affectation (23.8%), psychological/ economic problems- stress (20.4%) are the common causes reported as the causes to start smoking. When the knowledge of the participants about the effects of smoking on health is asked, 22.3% reported smoking as a cause of diabetes mellitus, 92.8% as a cause of lung cancer, 90.7% as a cause of heart disease and 61.1% as a cause of sexual problems. The relation between education level and being never smoked or ever smoked is not statistically significant (p=0.454).
Conclusion. Nearly 2/3 of the participants in this study are found to be ever smoked. The causes to start smoking and the relation between education status and smoking can render an opinion to inform people and start tobacco control measures in early ages. However, planning organization of meetings about the effects of smoking on health in work places will help us to reach many people at the same time.

P57
Russia Smokes: How Many, Much It Costs
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Background and aim. Russia occupies a leading position in noncommunicable disease (NCD) mortality rates among the developed European countries. Along with this, life expectancy at birth, especially for men, is the shortest in comparison with these countries. The aim of the study was to calculate the impact of smoking on mortality rates and life expectancy at birth in Russian men in order to have an evidence-based reason for working-out of effective antismoking policy to change smoking behavior in the country.
Methods. National data on smoking prevalence and smoking relative risk mortality for men of 35-74 years old as well as life table estimates for Russian men were used to calculate smoking-attributable mortality, potential life year and life expectancy at birth lost.
Results. Prevalence of smoking in men of 15 years and older is 63% that gives about 35 million of smokers in the country. There has been estimated of 270,000 smoking-attributable deaths per year in the group 35-74 years (210,000 in the group 25-64 years) or 781 standardized deaths per 100,000 persons/year (854 for the group 25-64 year). The amount of potential years life lost due to smoking-attributable deaths is 4,7 million persons-years (4,1 million persons years for the group 35-64 years). The premature deaths due to smoking result in 4 years lost of life expectancy at birth.
Conclusion. Smoking that stars in Russia at 11-12 years is very spread in adult male population. Considerable harmful consequences of smoking are observed in the working age population that responsible for the prosperity and well being of the nation. To reduce tobacco burden on public health and economics, effective antismoking policy has to be worked-out and implemented throughout the country.

P58
Nicotine dependence in chronic conditions – Findings from the Canadian Community and Health Survey
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Negative consequences of cigarette smoking may be especially harmful for people with chronic conditions because smoking can increase the severity of existing disabling conditions while creating new conditions. There is some evidence that a substantial number of smokers with chronic conditions continue to smoke despite their health problem. In the present stuffy, the authors evaluated the association between smoking, nicotine dependence and chronic conditions. The analysis was based on data from 43,943 respondents from the Canadian Community and Health Survey (CCHS-2.1), a nationally representative survey. Nicotine dependence was assessed using the Fagerstroem Tolerance Test. The prevalence of nicotine dependence was higher among subjects with chronic conditions in comparison to those without chronic conditions. Less than half of the subjects with chronic conditions had tried to quit smoking in the previous year, indicating structural and/or attitudinal barriers to smoking cessation treatments in clinical settings. Tobacco dependence should be recognized as a chronic condition and clinicians should be encouraged to treat it as a chronic condition, including counseling` advice, support, and appropriate therapy.

Country Experiences from WHO/CINDI Project

P59
Identification of population groups at risk for different health behaviours in Slovenia
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Background and aim. In 2001 a national/regional survey according to WHO CINDI Health Monitor methodology was lounched aiming at establishing prevalence rates for different health behaviours in adult population, and identifying population groups at risk to enable more focused planning of prevention actions in Slovenia.
Methods. The overall response rate of the mailed questionnaire was 64% (9.666/15,379), with 9,043 questionnaires being eligible for analysis. Binary multiple logistic regression model was used to

determine the impact of sex, age, education, employment, self-assessed social class, residence community, and geographical region on the prevalence of several risky health behaviours. On the basis of the model, the risk-score for each participant was calculated and converted to the estimation of risk for the observed outcome. All participants were put in an array according to their risk estimate. Those with estimate values above average risk were classified in the high-risk group, and those with estimate values above the 95th percentile in the very-high-risk group. The characteristics of both groups were compared to the total sample, representing the total population of adults of Slovenia, and the differences assessed using goodness-of-fit chi square test. Different combinations of characteristics denoted different group profiles. The profiles with the highest frequency, ranked on the first 10 places, were considered for focused public health planning.
Results. Population high-risk and very-high-risk groups for frequent perception of stress, smoking, three different types of unhealthy nutrition behaviour: that related to obesity and diabetes, to hypertension, and to atherosclerosis-based diseases (angina pectoris or myocardial and brain infarction), unhealthy behaviour related to alcohol consumption and physical activity, and others, were identified.
Conclusions. With above described methodology groups at risk for various risky health behaviours were successfuly identified and presented to decision-makers as evidence for public health policy.

P60

Development of health promotion and disease prevention strategy in Lithuania: Input of CINDI

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Recent developments in health systems around the world have given new prominence to health promotion (HP) and disease prevention approaches. WHO coordinated program, such as Countrywide Integrated Noncommunicable Disease Intervention (CINDI) program, during 20 years implementation developed into several national HP programs and disease prevention programs. The gained experience was helpful in the critical assessment of the health situation in the country and the development of the health system model. Several aspects of different research projects developed into the National Hypertension Program and the nutrition profile evaluation that provided theoretical background for the national healthy nutrition policy developed into the National Food and Nutrition Program. CINDI experience in health promotion and disease prevention was as a start point to initiate Lithuanian Healthy Cities network as well as network of Health Promoting Schools in Lithuania. Collaboration of many different sectors of society in order to achieve better health for communities stimulated to initiate the projects, which could integrate health promotion into medical through and clinical practice. Health Promoting Hospitals (HPH) project was the project, which we needed. In 1996 Lithuanian HPH network was created. The lessons learned from the CINDI were applied in the development of the national health promotion strategy and policy. The National Health Policy is based on legislation, financial and human resources, and is implemented by governmental structures, medical and non-medical institutions. It has been generally accepted that intersectorial cooperation, health education and involvement of the community are three main principles for successful health policy implementation and achievement of the overall goal - better health of the Lithuanian population. The WHO coordinated CINDI program was the most important vehicle for future studies, development of the National Health Policy and strategy, creation of the National Health Program.

P61

Epidemiological aspects and prevention of smoking in the Tomsk population using international experience of the "CINDI" Program

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Aim. The aim was to study epidemiological aspects of smoking in different population cohort of Tomsk and use population strategy of smoking prevention based upon experience of the international campaigns "Quit and Win" in the framework of the program CINDI-Tomsk.
Methods. Epidemiological peculiarities of smoking were studied in different population cohorts: students (1075 men and 1575 women aged 17-25 years), workers (682 men and 1138 women aged 25-64years), in families (non-organized population of 13453 men and 18938 women aged 30-74 years). The questionnaire included data about social status, behavioral factors (smoking, alcohol), objective data (height, weight, arterial pressure), history. We performed 5 anti-smoking campaigns (1996-2004) with 5010 (2.5% from smokers in Tomsk) subjects taking part in them. National Public Health Institute (KTL, Finland) provided all needed materials and instituted international super-prize. Smokers received also support for giving-up smoking using mass media, TV – video clips, round - table talks. Also, individual recommendations for quitting smoking (leaflets, booklets, brochures, posters etc) were given in Anti-Tobacco Centre.
Results. Standardized index of smoking prevention was 69% in men and 12.5% in women, 41,7% in students-boys and 10.7% in students-girls. Statistically significant correlation was revealed between smoking and educational level, alcohol using, social status and blood cholesterol and triglycerides, arterial pressure. Mean age of smokers (participants of Q&W) was 33

years, smoking duration was 15.2 years in men and 9.9 in women, 77-82% of them already tried to stop smoking. 78.3% of participants did not smoke during a month, 30.7% during a year, 20% of smokers decreased cigarettes' number.
Conclusion. The results obtained confirmed that population approaches should be used aimed at deciding such a difficult problem as smoking

P62
Population's Health of Yakutia
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The aim of the investigation includes estimation of the death rate dynamics of Yakutia's population in 1989 – 2003, analyses of the demographic situation and determination of reserves for death rates lowering.
Materials and methods. As the first information source table 51-c of Territorial direction of state statistics on discount of death rate and annual tables about number of population of Yakutia has been used.
Results. General number of population in Republic Sakha (Yakutia) in 2004 ye was 948,8 thousands people on data of All-Russian census. In whole during 1989 – 2003 ye mortality from general causes in republic increase among men by 47%, among the women by 14,6%. At that considerable growth of mortality was observe in group "External causes" (in 2,5 and 3 time accordingly), as well as from disease of systems of circulation of the blood near men on 78,4%, near women on 27,2%. The mortality from cardiovascular disease has first position in the structure of whole mortality. The first medical aid to population was doing in 245 ambulance station. It was introduced in practice new forms of activities in field of prophylactics of diseases: "The schools of health", "Landings of health", informative projects "Training of trainers", sociological and psychological investigation.
Conclusion. The largest of all contribution in whole mortality among men and women of Yakutia enter mortality from cardiovascular diseases. In Yakutia during 2000 – 2002 ye was marked stabilization and reduce of death rate of population from external causes, as well as decrease of whole mortality near women of able to work age. Social politics realized in Republic Sakha (Yakutia) have influence positively on the indexes of health of population.

P63
Job & domestic effort rather than health-intentional exercise prevail in Romania
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Introduction. Sedentarism appears at the last position (minimum risk) in the Romanian CINDI first demonstration area, within a hierarchy towered by psycho-social stress. We try to disentangle this rather surprising issue in a culture that apriori is not particularly prone to physical activity (PA) for health.
Methods. Anthropometry, blood chemistry and life style data were collected using lab tests and a standardized CINDI questionnaire applied to a group of 564 subjects (ss) (272 males – M and 292 females – F) randomly drawn from the police database in Pucioasa city (16,300 inhabitants in urban-rural southern Sub-Carpathians). Subjects were 43.8 +/- 14.6 (SD) years old, with 47.5 % in good health and 52.5 % with treated, non-acute health problems. The sub-sample was featured by an average BMI of 25.8 +/- 5.5 kg/sq. m (25.1 in M, 26.4 in F), systolic AP of 140.2 +/- 31.3 mmHg (139.4 in M, 140.9 in F), diastolic AP of 82.5 +/- 17.7 mmHg (81.6 in M, 83.2 in F), serum cholesterol (CHOL) of 180.5 +/- 47.2 mg/dl (173.8 in M, 185.3 in F).
Results. Occupational PA in 500 ss (non-active retired, students and unemployed were excluded) amounted averagely at 25.9 hours (h) equivalent mild effort/week (EMEW) in F and 56.2 h EMEW in M on a scale with the maximum at 111.25 h EMEW. In spare time 155 M with non-neglectible PA (i.e. over 60 minutes (min) EMEW) featured 301.1 min EMEW, while F (97 ss) summed 289.7 min EMEW (to be compared with minimally recommended 120 min EMEW). Globally, 44.7 % of ss in the sub-sample are active (33.2 F and 57.0 M) in the spare time. The total PA (job and spare time) was small in 31.9 % of ss (22.0 F, 9.9 M), medium in 52.1 % (26.1 4 f, 26.1 % M) and higher in 15.9 % (4.8 F, 11.2 M).

P64
The CINDI program in Yakutia
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The aim of the program is to improve health of population of Republic Sakha (Yakutia) by means realization of programs of noninfectional diseases prophylaxis and consolidation of health. A coordination council for administration of CINDI program was created, which consists of the representatives of ministries of republic. An investigation has been carried out on the territory of Yakutsk two administrative districts. 1 520 women and 1 520 men at 25 – 64 years old have been investigated by the method of personal interview. Every medical organization has got departments or offices of medical prophylaxis. In February, 20 – 29th, 2004ye in all republic and city medical–prophylactic foundations, central regional hospitals Decade of National Day of health was organized. During 23 – 29th of February 2004ye landing of health in Nurbinskiy and Suntarskiy regions with attraction of doctors from National Center of Medicine, was organized jointly with Committee on matters of families and childhood. During 24th of September – 1 of October in 2004ye there was a week of healthy heart.

During 15th - 24th of October in 2004ye republic action "One hundred plus one hundred" took place, it was devoted of century of Movement of sobriety in the Republic Sakha (Yakutia). VI international Action "Quit smoke and win" was organized on program CINDI, in which 1400 people from 20 regions of republic took part. Constantly acting tematical course on improvement of medical worker on prophylaxis of noninfectional diseases "Organization of Schools of Health" was organized in the Republic Center of Medicine Prophylaxis together with medical institute of Yakut State University/ It is aimed for patients with chronical noninfectional diseases.

P65

Russian Regional Ural experience in realization of integrated prevention of noncommunicable diseases

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Background. Approach aimed at treatment in Russian health system have made its inconsistence clear in solving public health problems. International experience (Finland, Canada etc.) and experience of some projects in Russia (CINDI) based on integrated intersectional approach to health promotion and noncommunicable disease prevention (NDP) reveal new ability to reduce burden of diseases and death in society. Chelyabinsk Region has experience in health promotion and NDP. Chelyabinsk was included in realization of CINDI Program elaborated by WHO European Regional Bureau. There was the International Meeting of Directors of CINDI Program in Chelyabinsk in 1996. The five-year, NDP program was firstly in Russia passed by Chelyabinsk Region Government in 1998. Aim of the work is summarizing of program realization outcomes in Chelyabinsk Region (3.6 million people) and discussing of system approach capacity to solve the problem in question. Methods For realization of the integrated program there were used evidence-based methods based on representative sample (2000 respondents) from population of Chelyabinsk Region; monitoring of behavioral factors, populations' needs and requirements for prevention measures; monitoring standardized death rates from chronic noncommunicable diseases; prioritization of partnership; development of health policy and solving specific targets.
Results. There had been formed evidence-based data of main risk factors, determined a population risk, and studied demographic characteristics. There was created the infrastructure for realization of the program namely the Prevention Department that was attached to the Ministry of Health. This Department coordinates prevention work in Region. There have been also approved the legislative acts of health policy development and financing. The School of Public Health was formed as a key component of continuous education system.
Conclusions. Changes in population health can be only using system approach for pubic health development and using evidence-based prevention methods.

P66

The strategy of struggle for national health

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Worsening of national health indices in Ukraine occurred within the latest 20 years: increase of total mortality (by 34.9 %), lowering of average life duration (of males- by 2.5 years, of females - by 1.1 years); increase of morbidity of main chronicle noncommunicable diseases according to official statistical data. Objective of the CINDI-Ukraine Programme is improvement of the population health by reducing the common risk factors prevalence of major noncommunicable diseases through creation integrated intervention programs and health promotion. Population of 309300 persons of 6 demonstrational areas (cities Kyiv, Kharkiv, Dnipropetrovsk, Ivano-Frankivsk, Poltava, Lviv) is involved in the CINDI-Ukraine programme. Standardized epidemiological biochemical, statistical and propagandistic methods were used. •High prevalence of noncommunicable diseases risk factors among able-bodied population has been detected: hypertension 35.3 % smoking (S) of males 43.9 %, of females 16.5 %, dislipoproteinemia (DLP) 24.5 %, overweight 56.8 %, low physical activity 43.6 %. •The priority significance of risk factors for negative populational survival prognosis has been determined. These data determined 3 main directions of CINDI program development in Ukraine: elaboration of national programmes for Arterial Hypertension Prevention and Treatment, national programme for health nutrition, struggle against S, creation of net of lipid centers. There is an unfavourable prognosis of population health in Ukraine which is an index of country welfare and efficiency of administration work. Integrated and goal-oriented approach of different structures of society for realization of public health policy are necessary in the present complicated social and economical conditions of the country.

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Macedonian CINDI vision for a chronic disease strategy - political and practical achievements, 2001-2005

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Background and aim. CINDI Programme in Macedonia began in 2001 with aim to reduce high mortality rate of chronic, noncommunicable disease (NCD) and increased prevalence of lifestyle risk factors in the population as a consequence of rapid political and socio-economic transition. CVD accounted for 57% of all deaths in 2002 and remains the major cause of death. To propose a new effective strategy various preventive programmes for isolated NCD and lifestyle risk factors were critically analyzed. The main aim was to implement an integrated, comprehensive and coordinated approaches with stable intersectoral partnership.
Methods. In the First Draft–Action Plan for CINDI Programme (2002–2007) priority was given to risk reduction on both community and PHC levels. Also it was proposed rationale use of the existing preventive services in PHC as integral component of health reforms. Macedonian strategy on NCD prevention is focused on the major social determinants: unemployment, poverty and social inequality. Complete strategic quidances in area of capacity building, establishment of national coordination, CINDI Health Monitor System and the recommendations for reduction of lifestyle risk factors are presented on the web site: www.cindi.makedonija.com.
Results. During the past four years (2001–2005) the following results were reached in chosen priority areas: 1. Lifestyle changes: -increased physical activity (Macedonian "Move for Health" Declaration and Programme, 2003); -healthier nutrition (National project for reduction of diet–related NCD risk factors, 2005). 2. Report of "pylot" CINDI Health Monitor survey, 2002. 3. Proposal–Project for establishing the First CINDI Centre in the city of Skopje, 2003. 4. CINDI Programme for Youth, 2004 adopted as state preventive programme in 2005. 5. Educational activities: -Establishing a new Cathedre for sport medicine at Faculty of Medicine, 2002. -New topic as a part of the postgraduate study on Public Health in area of physical activity, 2004. -Training courses, lectures and public health education (mass–media campaigns on 10 May, 2003 and 2004, web site and poster, 2004). 6. One of the major achievement is the acceptance to join in the European CINDI network on 23.07.2004 by Dr. Aushra Shatchkute, regional adviser.7. New publication with title: The First Macedonian CINDI Vision by Dr. Vera Simovska, national coordinator.
Conclusion. Countrywide implementation of the Global strategy on diet, physical activity and health (Puska P, WHO/HQ, Geneve, 2003) is essencial for reduction of NCD and major and sustained improvement in population health, in relatively short–term. National health strategy is urgently needed. The whole CINDI Programme and all the included activities were result of enthusiastic and voluntary work.

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Risk-factors for chronic disease on the area of Bosnia and Herzegovina

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Noncommunicable diseases have a bigger impact on morbidity and mortality of inhabitants in B&H from year to year. Many risk factors influence their beginning and the main are: diet, obesity, physical activity, smoking and alcoholism. It's important to evaluate these risk factors in some areas in order to decrease NCDs and to make adequate programmes for their prevention and control.
Aim. To research the main risk factors for NCDs in the southern part of B&H and to to give main directions for the making of programmes for prevention.
Methodology. The research was made by CINDI poll. 300 persons, older than 18 years and chosen by accidentally method, were questioned in the area of Mostar.
Results. For the preparing of food 38% of questioneers uses animal fat, only 14,1% consumes milk with fat lower than 2%. Bread is used very often, mostly white bread. Regular physical activity longer than 30 minutes does less than 10% of questioneers. Among the questioneers 64,6% are smokers, of which 47% smokes more than 20 cigarettes a day. Alcohol is consumed by 23,7% questioneers.
Conclusion. The adult inhabitants of Mostar have many risk factors for NCDs. The main are: diet rich with animal fat, not enough physical activity and smoking.
Preventive programmes have to involve the whole society in solving of this problem multidisciplinar.

P69

Health behaviour of the local population

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The health behaviour of the local population is a central area of responsibilities of local physicians and

politicians in collaboration with the mayor. Therefore it's important for the mayor to publish the success of his steps on the basis of the four risk factors which depend on the general life style in suitable intervals. For this CINDI Germany uses the praevalences of this parameters:

Smoking yes/no
BMI(Body Mass Index) >= 25 yes/no
blood pressure >160 and/or > 95 mm HG yes/no
cholesterol level >= 190mg in % yes/no

To increase the effectiveness and efficiency of the measures the Four Step Model was introduced. The first step refers to the occurrences of the parameters mentioned above before and after treatment. In the second step the medical practitioner tests his success within a randomised cohorte of his patients with the praevalence of the four risk factors before and after the medical treatment. The third step the private practitioners of the town or district compare their success in medical treatment with the praevalences (%) ascertained in the practices. The mayor and a representative of the local physicians publish the results of the third step once a year. In the fourth step several mayors debate their experiences by comparing the established prevalences. The main question is: How will the mayors get informed about the district's and town's praevalences? The local physicians provide these answers by pooling the praevalences ascertained in the practices. At least 80 % of the population consults a physician at least once a year, therefore the pooled data of the practices are very representative for the local population. These data will be cost-neutral conveyed to the mayor. Obviously the local physicians are interested in a rating of their own medical achievement referring to the struggle against the four risk factors. For this reason the physicians yearly form a retrospective randomised cohorte of their patients to compare the differences of the results before and after the treatment in a representative cross section (individual medical comparison). The cooperation of physicians, town councillors and mayors is decisive for the development of the model. In Germany, for example, a cooperation of the several states will also be needed. In general generated praevalences of the medical primary care can be seen as cost neutral because of the physicians duty to evaluate the medical success referring to the single patient as well as referring to a representative spot check. The data processing required on municipal and national plain should not be a problem with a appropriate development of the information technology all around the world. The mayors altogether take care of the development of the riskmaps in their own country and publish a so-called "National" riskmap yearly that provides the building stone for the "European riskmap". The major aim of the project is to develop a "Global riskmap". Because of the general European thinking in politics is put more and more in concrete terms the thought of a European riskmap must be classified as increasingly realistic.

P70

CINDI-Moldova experience in NCD control

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Following the WHO recommendations, stipulated in the Global Strategy for Noncommunicable Diseases Prevention and Control adopted by the World Health Assembly in 2000 we undertook our CINDI Programme activities related to NCD control on a rural demonstration area. A high spreading of risk factors was determined: out of total population surveyed 30% of cases – Arterial Hypertension; 46,5% of men and 0,2% of women are smokers; 53% - excessive salt consumers, 58,1% - alcohol abusers, 54,6% - overweight, 17,7% - obesers, 32,5% - hypercholesterolaemia, 9,4% - hypertrigliceridaemia, 13,9% - hypoalphacholesterolae-mia. As a result of the intervention activities effected within intersectorial collaboration some indexes have been improved: the number of hospitalized patients (with Arterial Hypertension, hyperlipidaemia), informing of population and health professionals, the number of the treated patients increased. The obtained result, served as arguments for the elaboration of national programmes for NCD control approved by Central Government decisions: including cardiological, oncological, diabetes and respiratory diseases (some of which having a financial support). The Parliament of the republic of Moldova adopted a number of laws packages related to the population nutrition improvement (4 laws concerning food products labelling, food quality normatives, consumers' rights, 5 lows with respect to tabacism, alcohol and drug control). During 5 years of study experience in collaboration with parteners such as Local Public Administration, educational and cultural institutions, mass-media, NGO's has been obtained. The value of the ways of fortification of the potential to involve in NCD control was enhanced.As a conclusion of the effected study we identified an unsufficiency of prevention specialists, intersectoral cooperation, financial resources, and the non-medical structures are not entirely aware of their importance in NCD control. In the realization of the programme it was specified that countries with a limited economical potential should focus on the disease prevention by using the existing structures, enhancing, by all means, NCD control.

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Collaboration between CINDI Moldova and the Health Promotion and Disease Prevention Project

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Non-communicable Diseases (NCD) represent a major damage of the primary health care of the Republic of Moldova which determines 85-89% of the total mortality of the population. The reduction of NCD levels can be obtained through health promotion and disease prevention measures. NCD prevention

activities in the Republic of Moldova were initiated and implemented by CINDI Programme. The Health Promotion and Disease Prevention Project (HP&DP) funded by the European Union and implemented by the Consortium Epos Health Consultants and CII Group, aims at Long Term Improvement in the health of Moldovan people. HP&DP project team in collaboration with CINDI team has developed the Health Heart Action Programme, which has been implemented, the themes of which included nutrition, tobacco, alcohol and physical activity. In the frame of this collaboration programme the activities targeting the policy strategies have been performed. A remarkable achievement of the collaboration was the support of local communities to organize by themselves successful health promotion events.Another issue was the elaboration of health promotion materials, aimed at raising awarness on healthy lifestyle and risk factors prevention. The further collaboration included trainings, workshops and lectures that have been performed. This collaboration aimed to prevent cardiovascular disease, cancer, chronic obstructive pulmonary disease and diabetes, as well as mental disorders and injuries, these diseases being linked by risk factors related to lifestyle. Health improvement programme and local authority community strategies needed to be coordinated and ultimately integrated, through local strategic partnerships, to ensure they focus more specifically on reducing health inequalities and tackling the social, economic and environmental influences on health. The experience of this collaboration will serve as an important example in the planning and implementation of future prevention and health promotion activities.

Chronic Diseases, Morbidity and Mortality

P72

Prevalence of selected chronic diseases and disorders in Slovene adults according to the past life-long physical activity

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Background and aim. Besides health protective influence of regular physical activity (PA) there exists also firm evidence that physical inactivity represents a major risk factor for many noncommunicable chronic diseases (NCDs). There are only few data available on the relation of the long-term regular PA and different NCDs/disorders.
Methods. A national survey on health status and health behavior of the Slovene adults, aged 25-64, included 4,238 inhabitants from three representative regions. The overall response rate was 54% (n=2,222). The prevalence (as %) of selected NCDs diagnosed by a physician (hypertension, diabetes, ischaemic heart disease, and musculo-sceletal diseases), and subjective symptoms during a month prior the survey (chest pain during exercise, back, neck/shoulder, and other joints pain) were determined in five groups according to the percent of past life-time in which the participants practiced regular PA (group1: 0%, group2: up to 25%, group3: 25-49%, group4: 50-74%, group5: 75% or more). Chi-square test was used for statistical assessment.
Results. The differences in prevalence were significant in hypertension (group1: 24.0%; group2: 18.7%; group3: 17.3%; group4: 16.6%; group5: 20.3%; p=0.032), diabetes (group1: 5.6%; group2: 4.0%; group3: 2.3%; group4: 3.2%; group5: 1.3%; p=0. 0.043), and musculo-sceletal diaseases (group1: 36.9%; group2: 29.7%; group3: 25.9%; group4: 27.5%; group5: 30.4%; p=0.002) in the group of NCDs, as well as in of chest pain during exercise (group1: 10.1%; group2: 6.9%; group3: 5.6%; group4: 8.9%; group5: 11.4%; p=0.038) and back pain (group1: 42.9%; group2: 41.7%; group3: 35.4%; group4: 36.0%; group5: 35.4%; p=0.046) in the group of subjective symptoms. Conclusions. The results of our study clearly confirmed that physical inactivity is major risk factor for observed health conditions. In some of them high percent of physically active life-time proved to be a major risk factor as well. We can conclude that moderate life style in PA is most beneficial .

P73

Characteristics of the Hungarian crisis in liver-cirrhosis mortality

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Hungarian liver-cirrhosis mortality is among the highest in the world. The characteristic time-course followed by the country's mortality curve shows a progressively steepening growth beginning in the early 1970’s, a rapid twofold increase between the late 1980’s and 1995, and a sudden drop in 1996 followed by slow decline. Although the curve primarily reflects the mortality of middle-aged males, both genders and all but the youngest and oldest age-groups show similar changes. Alcohol consumption, the traditionally dominant determinant of liver-cirrhosis mortality, as reflected by national adult alcohol consumption statistics, does not seem to account for such radical shifts in mortality. There is also no readily available evidence for the role of microbiological or toxic agents, although certain components of illegally produced, low quality alcoholic beverages have recently been implicated. In

our current work, we examine Hungarian liver-cirrhosis mortality from an international perspective, and search for alternative explanations. Our ecological approach raises the possibility that a previously extensively used pesticide and persistent organic pollutant Dichlorodiphenyltrichloroethane (DDT) and its derivatives may have contributed to this unprecedented crisis.

P74

Ischaemic heart disease and other mortality among fishermen and their wives in Finland

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Background and aim. Fish is important in human diet mainly due to its long-chain polyunsaturated omega-3 fatty acids. However, fish may also contain environmental pollutants, such as polychlorinated dibenzo-p-dioxins, dibenzofurans and methyl mercury. Fishermen typically eat a lot of fish and are therefore a good population for research on health effects of fish. We examined the mortality pattern of Finnish fishermen and their wives compared with that of the general population.
Methods. Fishermen (N = 6,410, registered in 1976 at the earliest) were identified from the files of professional fishermen kept by the Ministry of Agriculture and Forestry, and their wives (N = 4,232) from the Central Population Register. Calculation of person years at risk began at the time of registration for the fishermen and at marriage for wives, and ended at death or on 31 December 2002. The cohort was linked with mortality data obtained from the Statistics Finland. The standardised mortality ratios (SMRs) and 95% confidence intervals (95%CI) were calculated for 54 causes of death, using the national mortality rates as the basis of expected numbers of cases.
Results. A total of 835 deaths were observed among the fishermen during 80,036 person-years at follow-up, and 300 deaths among the wives (51,988 person-years). The SMR for death from all causes was 0.72 (95%CI 0.67–0.77) among the fishermen and 0.82 (0.73–0.91) among their wives. The SMR for ischaemic heart diseases was 0.52 (0.45–0.60) among the fishermen and 0.50 (0.36–0.67) among the wives. In contrast, the SMR for water transport accidents was 4.80 (2.93–7.41) among the fishermen.
Conclusion. Fishermen and their wives have lower mortality from all causes and ischaemic heart diseases than the general population. Our ongoing study on the diet and other life-style factors of fishermen may partially explain these findings.

P75

Twelve-year trends of Tomsk population mortality from non-communicable diseases

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Aim. The aim of the study is to receive information about causes of death from NCD in persons aged 15-74 years deceased during 1990-2001 in Tomsk.
Methods. We used standard questionnaires on living relatives and persons deceased during 1990-2001 and examined archives data of Tomsk Statistical Administration, of judicial medical commission of experts and of ZAGS bureau registrations. Criteria to enter the database were men and women deceased in the age of 15-74 years who lived in Tomsk. A total of 38 059 persons were studied.
Results. Total mortality during 1990-2001 vary in men from 889 to 1588, in women from 509 to 784 per 100 000 of inhabitants being maximum value in 1990 and minimum one in 1993-1995. Mortality data from CVD during 1990-2001 vary from 330 to 659 in men, from 140 to 365 in women being minimum in 1990 and maximum in 1993-1995 too. Mortality dynamics from neoplasms vary from 182 to 240 in men and from 122 to 186 in women. Mortality indices from external causes vary from 172 to 430 in men, from 47 to 110 in women. Cardiovascular diseases take the 1-st place (35.6 % in men and 44.7 % in women) in the total mortality structure, external causes in men (22.3%) take the 2-nd place and in women (11%) take 3-nd place; neoplasms in women (23.7%) take the 2-nd place and in men (17.4 %) take the 3-rd place.
Conclusion. Total mortality of the Tomsk population aged 15-74 years revealed significant changes throughout 12 years: mortality from CVD and external causes increased both in men and in women. Increased mortality from non-communicable diseases points to unfavorable demographic prognosis.

P76

High prevalence of metabolic syndrome among healthy middle-aged individuals in Estonia

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Introduction. The prevalence of metabolic syndrome (MetS) is escalating all over the world and is increasing the cardiovascular (CV) mortality risk up to 3 times. Different population-based investigations have revealed, that this syndrome might affect up to 24% (in USA) of adult population. The premature CV death in Estonia is 2,5 times higher than the EU average being the highest in the whole Europe. The aim of this study was to estimate the prevalence of MetS among healthy middle-aged individuals in Estonia, who partitipated in CV screening program finaced by Estonian Health Insurance Fund during 2004.

Methods. People aged 30-60 yrs were invited to health examination by advertisements in mass media from Tallinn and its surrounding county. During 2004, the anthropometrical measures (BMI and waist circumference), serum cholesterol profile, plasma glucose and other CV risk factors were investigated in 680 subjects. MetS was defined according to ATP III criteria (2001).
Results. The overall prevalence of MetS in healthy people at working age in Estonia was 20%. MetS was most prevalent in men at any age (Figure 1). Average BP was higher in MetS group (by 13/7 mmHg) compared to people without MetS as was the diabetes heredity (22% vs. 13%, respectively, P<0,001 for all). MetS group showed a significantly higher prevalence of all other CV risk factors as well including cholesterol, smoking and sedentary lifestyle. Most prevalent component of MetS was high BP (in 78%), followed by high triglycerides (65%), high waist circumference (64%), hyperglycemia (53%) and low HDL (26%). According to Framingham risk score, 13% of subjects were classified as high-risk population. However, according to SCORE risk chart 20,5% of subjects were at high-risk for CV mortality.
Conclusions. MetS was unexpectedly high in otherwise healthy middle-age Estonians. Additionally, Framingham risk score underestimates the CV risk status in people with MetS.

P77

Investigation of old age mortality structure in the presence of co-morbidity

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Background. People at old ages suffer many chronic diseases and health impairments which means that the concept of 'cause specific mortality' could be misleading. Often at old ages a person dies not from a single cause but in the result of action of several causes and health conditions. These causes and conditions are mutually dependent and demand in specific analysis exists. The present report describes the time and age trends in structure of mortality in the presence of different conditions which are addressed as co-morbidity.
Data and methods. Public use data on Multiple Cause-of- Death for 1968-1999 provided by the National Center for Health Statistics USA were investigated. The data include all deaths occurring within the United States. Data are obtained from death certificates and include underlying cause of death and addition multiple conditions codes. The data are analyzed using tabulation by time and age for proportions of cause-specific deaths among all deaths under specified conditions. The results are visualized in form of color contour maps in time and age coordinates.
Results. Trends in the mortality structure are clearly identified in the contour maps by age and by time. The role of co-morbidity increases with age. Some conditions demonstrate negative association with specific underlying cause of death. The example is total cancer as underlying cause of death and presence of asthma as condition. The proportion of death on cancer with asthma conditions up to three times lower than that without asthma.
Conclusions. Presented analysis indicates the influence of co-morbidity on mortality structure at old ages. Such relationships are to be incorporated in projection of trends in mortality and in estimation of health support programs efficiency. A protective role of some health conditions against death can reveal the new biological mechanisms for health protection.

P78

Connection between the economic development of sub-regions and mortality data in Hungary at the end of XX th century

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Background and aim. The system of sub-regions was established in 1997 in Hungary. There are 22 sub-region on the Southern -Transdanubian region in Hungary.(620 villages and 32 towns, with population of 1 million.) Central Statistical Bureau created 5 types of the sub regions by economic development: dynamically developed, developed, “closing up”, stagnated, disadvantaged. In our investigation we try to find out, is there any relationship between economic development and mortality rates of the certain population.
Methods. The population of the sub-regions were divided into 5 groups and standardized Mortality Rate (SMR) were analysed. (Standard: the total Hungarian population.) Apart from total mortality, the heart diseases (hypertonia, ischaemic heart disease), stroke, cancer mortality (gastric cancer, colo-rectal cancer, lung cancer), chronic respiratory diseases.
Results. The population of sub-regions, which are disadvantaged have higher mortality rate almost in all aspects.(exception is the colo-rectal cancer – we can not find it in the poorest sub-regions.) All the next levels by the economic development show better mortality rates. The sub-regions, which are dynamically developed, have the best SMR-s.
Conclusion. The sub-region can be the area in one region, where the economy and health status (health care) should be managed together. It is worth to call politics (politicians’) attention to the necessity of parallel development of economy and health-policy especially in poor sub-regions.

P79

Epidemiologic analysis as a base for preparing the health care measure programme in line with health priorities

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Background and aims. The report illustrates the way in which Croatian National Institute of Public Health uses epidemiological analyses to select priorities for Croatia's Health Care Measure Programme and its elaboration.
Methods. The presentation uses general, specific and standardised mortality and hospitalisation rates.
Results. Epidemiologic analyses were a base of the current Programme and a preparation for its amendment. In Croatia, NCDs are the leading cause of mortality and hospitalisations. Cardiovascular diseases ranked first among the causes of death in 2004 with a rate of 562.5/100,000 and a ratio of 50.2%. Most common among these were ischemic heart diseases with 18.4% of the overall mortality, cerebrovascular diseases (16.0%) and cardiac insufficiency with 5.9%. Neoplasms followed with a rate of 279.6/100,000, a ratio of 24.9%, and lung cancer as the leading diagnosis. Respiratory diseases ranked third with a rate of 65.2/100,000 and a 5.8% share of the overall mortality. At it, pneumonia accounted for 3.0%, while bronchitis, emphysema and asthma did for 2.4%. With a rate of 1,790.5/100,000 and a 13.6% share of the hospitalisation total, neoplasms were the most common causes of hospitalisation in 2004 (preliminary information). The cardiovascular diseases with a rate of 1,780.2 and a share of 13.6% follows them. The respiratoty diseases ranked fourth with a rate of 1,127.6 and a share of 8.6% of total hospitalisations. In all leading diagnostic subcategories smoking is the main avoidable risk factor. There were 34.1% of male and 26.6% of female daily smokers aged 18 65 years in 1997 in Croatia. It is estimated that approximately 10,000 people die of smoking related diseases annually.
Conclusions. All three of the disease groups were elaborated in the Health Care Measure Programme with special emphasis on the adoption of a healthier lifestyle, no smoking included, and on the prevention ranging from primary to tertiary.

P80

Lower limb atherosclerotic disease significantly impairs patients´ health-related quality of life

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The purpose of this study was to describe the health-related quality of life (HRQoL) of patients with lower limb atherosclerotic disease (LLAD). The study group consisted of LLAD patients classified as Fontaine II (intermittent claudication) and scheduled for elective surgery (n=31) or an endovascular procedure (n=85). The patients with conservative treatment (n=64) were drawn from the patient files. The HRQoL of patients with LLAD was evaluated before the treatment. The HRQoL of the patients with LLAD was also evaluated in relation to the HRQoL of the age- and sex-matched general population (N=2597). In addition to this, the correlations of the background factors with subjective HRQoL were assessed. The NHP (Nottingham Health Profile) instrument was used to measure the patients' HRQoL and rehabilitation. The HRQoL of men with LLAD was significantly poorer on all dimensions of NHP than the corresponding HRQoL an age- and sex-matched general population. The male patients with LLAD had poorer HRQoL than the corresponding female patients on the dimensions of energy, emotional reaction and social isolation. The subjects with more than average problems with HRQoL were generally men, did not exercise, were on pension, were only able to short a walk distance without symptoms of claudication, felt their subjective health status to be poor, were poorly able to manage at home, needed a personal caregiver and had less interaction with other people than the others. LLAD appears to affect negatively especially men's entire life and to interfere with their basic daily activities, preventing physical mobility and sleep, causing pain, social isolation and a decline of energy and arousing the inevitable emotional reactions of fear and depression. On the basis of these results, there is a need for a longitudinal study where the patient's HRQoL and the changes in it would be followed -up after different treatment procedures.

P81

Effectiveness of integrated diabetes care

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A high standard of diabetes care is of importance in preventing complications of diabetes such as cardiovascular disease or retinopathy. In the Netherlands, as well as in other countries, many integrated diabetes care projects were set up in order to improve the diabetes care.
Research question. How effective are integrated diabetes care projects in improving the quality of diabetes care?
Methods and data. We performed both a review of the international literature on effectiveness of diabetes care as well as an analysis of data from three Dutch integrated diabetes care projects (n=23.492). Projects were compared on the diabetes care provided and the results of this care in terms of process indicators and patient outcomes. The results of the analysis were compared with the results form the review.

Results. Projects on integrated care are difficult to compare as they all operate the care process differently. However, most projects include important components of integrated care like specialized nurses, multidisciplinary meetings and protocols. Both in literature as well as in the data-analysis, it appears that process indicators showed high scores, i.e. that diabetes patients are well controlled. Integrated diabetes care lowers the Hba1c levels and may also have positive effects on the total cholesterol levels of diabetes patients. It is, however, less conclusive as to the effects on cardiovascular risk factors and diabetes complications.
Conclusions. Our study shows that integrated diabetes care results in improved control of diabetes patients and improvements of Hba1c levels. However further improvements can be made, in particular on the prevention of cardiovascular risk factors like hypertension, cholesterol and body weight.

P82

Organization of the arterial hypertension control under conditions of the city's polyclinic

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Introduction. The primary level of the public health is a unique place where potentialities both for assessment, and cardiovascular risk control are available. In this connection, the necessity to establish the centers on primary prevention of cardiovascular diseases at some territorial polyclinics of Belarus is motivated. An adequate control of the epidemiological situation as regards cardiovascular diseases, including arterial hypertension (AH), can be provided under conditions of these centers.
Methods of investigations. At the Center on Primary Prevention of Cardiovascular Diseases located on the basis of Polyclinic No 36 of Minsk-city, the work of the nurses was entirely oriented towards the detection and correction of risk factors of cardiovascular diseases. In this process a fitting place belonged to the work with hypertensive patients and a nurse was a main connecting-link between a doctor and a patient. Special attention was paid by the nurse to team educational trainings with patients. During trainings much time should be paid to the major principles of prevention and to the fundamentals of healthy lifestyle.
Results and Discussion. Among persons trained at the School for Hypertensive Patients the positive dynamics in the decrease of the AH prevalence by 18.46% was observed.

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